AMSTRAD PCW

8000 PLUS

8256 ● 8512 ● 9512

Best of friends

Discover how the PCW and the PC can work hand in hand

PLUS

■ **LocoPlus: 5 pages of essential LocoScript advice**

■ **How to repair your printer - turn to our 10-step guide**

■ **On test: the Canon BJ-10e Bubblejet printer**

■ **Win a brand new PCW keyboard!**

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OPENING MENU

10 LIVING TOGETHER

57 PRINTER REPAIRS

90 COMPETITION!

Have you ever wanted to...

A: group 0/MEMBERS .LST LocoFile.   Printer idle. Using A: M:
Index: Surname   Unique   Item: None   Col:60/60 Line: 1/15
f1=Actions f2=Index f3=Item f4=Print f5=Goto f6=Find f7=Extract f8=Options EXIT

Record:46
Title   Initial Surname
Mrs   D L   Wheeler

Address   Home ph
24 Oak Place   0732 98
Epson
Surrey,   Office
KT17 4AA

                       Specia
Date of birth   Rambli
12/9/57   Hockey

Dear

Membership Renewal

Your membership of the society will be due for renewal at the end of the
month. Since last year, whilst we have been able to maintain the main
subscription unchanged, a number of the special interest groups have had
to increase their supplemental subscriptions.

I note that you belong to the following special interest groups:

To block
✓ Title
✓ Initial
✓ Surname
✓ Address
  Home phone n
  Office phone no
  Special interest
  Date of birth
▶ Extract items
  Select all
  Select none

Store names and addresses in a computerised card index

Keep details of your photographs or record collection

Sort information into any order

...then you need LocoFile

LocoFile is to a card index as LocoScript is to a typewriter! You can simply automate your address book or index and cross-reference books. You can choose to print labels or keep records of customers or club membership – almost anything you can think of! Information is kept sorted into order – alphabetically, numerically, or by date, and at any time you can instantly call up a record on screen.

If you have a PCW 9512

Then for only £34.95 LocoFile will work with all your existing LocoScript software.

And if you have a PCW 8256/8512

If you are still using the original LocoScript 1 software, then LocoFile with LocoScript 2 is ideal for you . For £44.90, you get all the benefits of LocoFile plus LocoScript 2, the faster, more powerful version of LocoScript – at a saving of £20 on the separate prices of LocoScript 2 and LocoFile.

To receive a copy of our 20 page brochure on the LocoScript Family or see LocoFile in action, please phone Katy Buchan on 0306 740606 for the name of your nearest Locomotive Software Authorised Dealer.

LOCOMOTIVE SOFTWARE
Dorking, Surrey,
RH4 1YL

Individually LocoScript 2 costs £29.95 and LocoFile costs £34.95

With Spring very definitely in the air, we've decided to yield to the season's influence, and take a fresh look at a well-worn topic.

The PCW/PC relationship, which suffers more as a result of users attitudes than anything else, can be a very fruitful one. With so many of your favourite PCW software packages being released in PC format these days, there's an awful lot which PCW owners can teach other users about such programs. It can be frustrating to have to switch between machines in the transition between home and your place of work, so we've equipped you with some useful pointers as to how to make that journey more comfortable. It's not a case of deciding which machine is better than the other, but rather of cultivating the rich supply of common ground between them.

This month also sees the release - and evaluation - of the first ever 'alternative' PCW keyboard. A sleek little piece of hardware it is too; and we're giving you the chance to see for yourselves, in a special competition. We've got three keyboards to give away, so send your entry in while stocks last!

And, if Spring has put you in the mood for a spot of cleaning - or overhauling, to be precise - check out our fully illustrated printer maintenance feature on page 57!

We're also putting the rather nifty Canon BJ-10e Bubblejet printer through its paces - and there's a special star guest from the PCW industry at the helm of this month's Speakeasy, too.

It's an action-packed issue - so, pull up a chair, make yourself comfortable, and enjoy this month's (Fool free guaranteed) 8000 Plus!

WELCOME TO THE PCW!

SCA launch an "improvement" package for newcomers to the 8256

Amid continuous rumours that a new PCW is to hit the market, we can reveal that new users are still flooding to the existing machine in their droves! The latest tempting offer from Amstrad in the national press– an 8256 for just £299 – has seen the PCW selling like hot cakes.

And SCA Systems, a company who believe in striking while the iron is hot are backing up the boom with an exciting new release. Their new product is called PRO 8256, and they describe it as a "low cost simple upgrade to improve the capability of the PCW 8256".

It provides enough memory to bring the 8256 in line with the more expensive PCW 8512s. And it also provides a revolutionary built-in interface, allowing an external printer and any other add-ons to be connected to the back of the PCW.

First time buyers don't have to worry about installation - or the protection of the warranty. The PRO 8256 simply slots on to the expansion port at the back of the PCW. To get down to facts and figures, this provides 256K of RAM, one RS232 serial port, and one parallel port. The only thing missing is a through port.

Like other SCA products that have gone before, such as the Rampac, the PRO 8256 can be used with LocoScript or CP/M without problem. Also in line with previous releases, you can continue to expand your RAM as and when you wish. The PRO 8256 can be purchased from any Centresoft dealer or direct from SCA by calling (0903) 700288. And the price, at £86.25 (inc. VAT) is definitely right.

CARRY ON, DOCTOR!

Here at 8000 Plus, we are often to be found on our collective soapbox, extolling the virtues of backing up of all your files. Nonetheless, accidents do happen, and Dave's Disc Doctor service has just had another bumper financial year. We're delighted for Dave, because all the profits from his service go to charity. And last year, that meant a whole £15,000.

This was the result of salvaging nearly 1000 discs, sent in by the PCW-ing public at the prompt of the dreaded error message "Address Mark Missing". And our readers are not the only ones to support Dave in his efforts.

Locomotive Software have just donated a copy of LocoScript PC to the company, and National Power have kindly provided the machine to run it on. So, Dave is currently making plans to include LocoScript PC in his rescue repertoire.

If you do have a damaged disc and think that it's a job for Doctor Dave then the address to send it to is 41 Tutsham Way, Paddock Wood, Kent, TN12 6UA. Dave Smith can be contacted on (089283) 5974 for further details.

by Karen Donaghay

OLD FAVOURITE

For those who fit into any one of the following categories: rabbis, church ministers, sabbath school teachers and all biblical scholars – the following news will no doubt revolutionise your life. Even if you are none of the above, this may still be of interest, providing you can speak Hebrew.

Just released is the whole of the Old Testament in its mother tongue. It is available on six LocoScript discs, at a cost of £38 for the lot (or £29.50 for students). Any individual disc can be obtained for £8.

Writing in Hebrew does of course bring its own problems: tiny vowel points, obscure punctuation marks and text that goes from right to left. Dr Instone adapted LocoScript to allow Hebrew text way back in 1989 and this upgrade is still available for £13.95.

The address to write to is the same: Dr David Instone Brewer, 12 Crundale Crescent, Llanishen, Cardiff, CF4 5PY and the number to ring for further details is (0222) 758484.

THE YOUNG ONES

Many of you have bestowed cash on the Star empire, by buying one of their printers. If so, you may be pleased to hear that a small portion of your hard-earned pennies have gone to what can only be described as "a good cause."

Star are running a competition entitled "The World and our Future". It is open to schools around Britain and the challenge is to produce a project on such topical subjects as global warming or today's 'throwaway' culture.

We welcome news of the competition; 8000 Plus often encourages you to think green by re-cycling your ribbons, and repairing your printers rather than throwing them on the scrapheap.

For competition details, contact Star at The World and our Future Competition, Byron House, Wallingford Road, Uxbridge, Middlesex, UB8 2RW, telephone (0895) 52131. Top prizes include computer equipment, and regional winners will be taken to Japan for a cultural exchange.

From printers to ecology: Star are making a concerted effort to encourage young minds everywhere to think green

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VERBIAGE £5.95
Based on the popular TV Quiz "COUNTDOWN". Make the longest word you can from your chosen letters " VERB - CONSONANT" - the computer will do the same. The longest word wins! Excellent graphics and gameplay.

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A multi-choice game with plenty of fast-action graphics and sound, competitive scoring and a wide variety of questions. Fun for all ages. "Guaranteed completely trivial" - 8000 Plus.

SLIDER £5.95
A unique computer version of the popular mechanical sliding squares puzzles. Pictures are divided up on a grid of squares, then mixed up; your task is to slide them around to re-assemble the pictures.

PCW DRAUGHTS £5.95
A well-presented and challenging version of the popular board game, played against the computer. Large, clearly presented board making the most of PCW's hi-resolution graphics.

FUN & GAMES £5.95
Plenty of entertainment with these well-known classics - Pacman, Space Invaders, Bomber, Maze Game, Hungry Snake, Pressup, Ping-Pong, Return To Arg, Game of Life, Bugs & Golf.

PIT YOUR WITS £5.95
Pit your wits against the computer with these popular games - Chess, Othello, Mastermind, Spellit, Rubiks Cube, Stone (Awari), Biorhythm Plotter, TicTacTo and Word Search Puzzle Maker.

JUNIOR CHALLENGE £5.95
An entertaining selection for youngsters - Aerial Antics, Battleships, Burglar Bill, Car Park Blues, Fly Race, Biblical Hangman, MasterMind, Post Haste, Solitaire, Table Tester, Widget Factory.

AMUSEMENTS AND DIVERSIONS £5.95
Startrek, Lunar Lander, Merchant, Trade, Boggle, Baseball, 3D Noughts & Crosses, Chase, Quest, Homonyms, Horse Racing, Civil War, Baccarat, Craps, Hunt The Wumpus, Swarms, Blackjack, Square, Crazy-8, Hangman American Football, Queen, Spies, Nim, Dots, Dragrace, Pilot, Strobe.

COLOSSAL CAVE ADVENTURE £5.95
The famous game which originated on main frame computers, with save and re-load, Plus BESTIARY, "A well-produced, novel adventure" - Bill Brock Adventurer's Guide.

PCW CHALLENGE £5.95
Four entertaining cult games from Nemesis:- The Trial of Arnold Blackwood, Arnold Goes To Somewhere Else, The Wise And Fool Of Arnold Blackwood, Brawn Free. "A good challenge lots of hints and tips and a good range of responses" - 8000 PLUS.

LOGO LOGIC £5.95
Educational programs for DR-LOGO (supplied with your PCW):- Plan the shortest route with AIRLINER, Play ANAGRAMS and HANGMAN, use DRAWING with the LOGO turtle, Write and print tunes with MUSIC printer and use the DISC LABEL PRINTER.

FUN WITH GRAPHICS £5.95
PCW-DRAW - simple drawing program - create, save, edit, print pictures BIO-MORPH Start with a simple figure after a few generations you have a set of complex and unique creatures Plus GRAPHIC ROUTINES and README for 45 character PCW screen width.

WORD - SPREAD - BASES

WORD PROCESSOR £5.95
A powerful WordStar-like editor which offers full screen editing, full block operations, windowing, automatic horizontal scroll (line length up to 255 characters), macro functions, word-wrap, formatting, pagination, find/replace, pagination, undelete and more.

SPREADSHEET £5.95
For home accounts, mortgage repayments, business and multiple calculation exercises. 60 rows by 26 columns. Menu-driven - enter text, numeric value or calculation (+ - x / with reference to any cell or total). Print facility and documentation.

DATABASE £5.95
A small relational database for storing simple data and producing reports from the data. Uses free format query language with macros and commands plus on-line help. A good introduction to the concept of databases. Disc also contains a useful Inventory Database.

KEYBASE II £5.95
Menu-driven - Record Set Up, Data Entry, Erase, Count Records, Set Report Fields, Run Report Search, Display Last Output, Repeat Last Search, Search & Extract, Set Key Index, Print Records. Capacity limited on Shareware version "KeyBase is well designed simple to use and it works. A good value database." - 8000 PLUS.

NUMBER CRUNCHER £5.95
Does for calculations what your Word Processor does for text. Retrieve mathematical expressions (formulae) from disc files, calculate their results, modify them and store them back on to disc. Create files of formulae. Menu prompts and on-line help. Up to 15 sig.figs., over 100 characters, arithmetic, trig, log and % expressions.

HOME & BUSINESS

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Keep a mailing list, addressbook, club membership file or catalogue your records, CD's, stamps or books. Similar to a card index system or Filofax, comes with sort and printer routines. Easy to use.

HOME ACCOUNTS £5.95
A new home accounting program written by a UK author with all the facilities you need to track your bank account and plan your budget.

HOME VIDEO £5.95
Keep track of your video collection with this purpose-built program. Offers four Sort options and Forms Management System to print in order of title number, video number, global alphabetic or unique.

HOME INVENTORY/HOME INSURANCE £5.95
Record your valuables for house contents insurance. Or how much money you're spending, the value of your stamp collection, the value of your assets. Or use a simple stock-taking program.

PRINT MASTER (dot matrix) £5.95
Now you can use your PCW and printer to good effect by designing and printing your own customised Letterheads, Stationery, Calendars and Greeting Cards. Also prints signs and banners.

PRINTMASTER TOOLBOX (2 disc set) £9.95
Features a wide range of over 600 graphics for use with Printmaster plus GALLERY program to view graphics on-screen before printing.

LETAFONT (dot matrix) £5.95
Change the letters and revitalise your PCW screen with this set of 16 new fonts. Works with most CP/M-based programs. Edit your own set of fonts and even print them out.

EXPERT SYSTEM £5.95
Use your computer for decision making, and problem analysis. Build up a knowledge base on any subject then, by answering a series of questions, reach a logical conclusion.

THE DESKMASTER £5.95
Comprises a desk-top appointments calendar, calculator, memo-writer, card-file database. Plus Label Printer, Home Accounts, Mortgage Calculator, Weather Forecaster.

KERMIT & FRIENDS £5.95
Plenty of programs for data transfer between computers (local/remote) Access Viewdata, Prestel, Databases and Bulletin Boards. With Kermit, UKModem7, MEX and various communications utilities.

HI-HO FILE TRANSFER £5.95
Originally issued at commercial prices this very straightforward menu-driven program offers fast file transfer in and out of your PCW (needs serial interface and null modem cable)

STD CODEBOOK £5.95
Text files containing lists of all the UK STD codes and corresponding exchange names in numeric and alphabetical order. Files are squeezed to get on one disc.

PROGRAMMING

THE Z80 PROGRAMMER £5.95
A complete Z80 Assembler creates an executable .COM program from your Assembler file. Plus Z80 Disassembler, Debugger, Library, 8080 Disassembler, Z80 to 8080 Translator, utilities.

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The powerful Z80 Disassembler with full set of associated utilities.

THE C PROGRAMMER £5.95
Not sure which language to go for? Try the Small C Compiler, a practical and useable introduction to C. The disc includes source code and documentation. Produces executable .COM programs.

C TOOLBOX £5.95
Examples of C at work. C source (for a variety of compilers) with .COM programs. As a bonus the programs are quite useful too.

PROLOG - 80 £5.95
Fascinating introduction to AI. I/O control, database manipulation, global variables, arrays, blocks, unification etc. With editor.

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Find out more about this fascinating Artificial Intelligence interpreter. Plenty of on-disc documentation.

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A professional-quality Pascal Compiler which comes with extensive documentation and plenty of source code examples.

GOING FORTH £5.95
A comprehensive FORTH compiler which produces executable programs. With extensive documentation, library files, utilities.

UTILITIES

INSTA-MENU £5.95
Locoscript-style menu presentation for CP/M programs. Easy access to user areas, simple cursor-controlled program selection for running, typing, erasing and copying programs. A good "front end".

IN-CONTROL £5.95
FILE CONTROL features Copy, Delete, Rename, Print Change User Number, Change Attributes, Log, Sort, Go To and Word Processor-style text file editing. DISC CONTROL features Disc Map, Disc Parameters, Sector Editor, File Editor and Unerase.

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DISC ORGANISATION £5.95
CATALOGUE your discs and produce a printed index, archive files and save disc space, MENU SYSTEM, FILE DATING SYSTEM, DISC UTILITY, SQUEEZE/UNSQUEEZE will save up to 40% disc space.

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NEVADA COBOL COMPILER £33.95
COBOL is an industry standard data processing language, suitable for business applications. Based on ANSI-1974 Standard COBOL, Nevada features runtime error messages, random access and sequential files and integration of assembly language using the DR MAC assembler.

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NEVADA FORTRAM COMPILER £33.95
Adheres closely to the ANSI x3.9-1966 standard with some 1977 extensions. Advance features include THEN, ELSE, COPY, CHAINing and TRACE. With two-pass assembler, random I/O file, 25 general purpose subroutine/function library and runtime error reports. No linking.

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CUTTING CORNERS

NEW DIRECTIONS MICRODIAGONALS

Diagonal text can be very effective, and is now possible with the new Micro Diagonals.

Micro Design is not the sort of program to cut corners – much to the despair of many aspiring typographers. But now with MicroDiagonals you can cut a corner with ease, and to good effect. A new product from Exemplar allows text to be written diagonally across the page – known in the trade as a flash.

It is a widely used technique, particularly for eye-catching advertisements. The gaze immediately alights on the flash simply because it is at an angle to the main text. When it carries a message such as "New" or "Bargain", the hype is difficult to ignore.

The new package comes from the creators of MD Cleartext – a popular font collection for Micro Design. Called MicroDiagonals, it costs £18.50 (including postage) and contains over 400 separate templates. As Exemplar so rightly point out, this is a first for the PCW. In fact they describe it as "the essential add-on for Micro Design users in 1991."

More details can be obtained from the Exemplar crew. The address to write to is Exemplar Design, P.O. Box 683, Bath, BA1 1XU. You can also telephone them on (0225) 315131.

KEEPING TRACK

Club 29 Computer Systems have recently finished work on a brand new record collection cataloguing program, which looks set to help all music lovers keep a track of their favourite discs.

The database is designed especially for the job, and will hold details of artist, label, catalogue number, year of release, and details of all the tracks. It has a 1,200 album capacity when used on the PCW8512/9512, although that is seriously reduced on the PCW8256.

Purported to be very user friendly, it is able to locate an album from just one word on one track title.

"The Album System" will be available later in April, and costs £13.99 (plus postage and packing) from Club 29 Computer Services, 3, Avon Close, Winnersh, Berks RG11 5PG.

8000 Plus will be taking The Album System out for a spin in the near future.

BRIGHT AND BEAUTIFUL

Now you can bring a spot of colour into your life, if you have a DeskJet printer.

Rodesign have just released a range of inks, for use with the Hewlett Packard range of DeskJets. The ink is simply squirted into an empty cartridge and comes in some dynamic colours: blue, red, green, violet and brown. Refilling is, according to Rodesign, an easy process, with no mess involved.

In fact they suggest building up a range of colours. You can then produce multi-coloured images, by re-printing on the same piece of paper with a different colour. So, start saving those empties immediately!

A twin refill pack is on special offer until the end of May at the price of £12.95. (The usual price is £14.95.) Rodesign also supply indelible black ink refils, for those of you who believe in the permanent things in life, and of course ordinary black refills.

Rodesign can be contacted at 195 Milwards, Harlow, Essex, CM19 4SJ, and their telephone number is (0279) 444313.

PRICE WAR - PART I

Do you need a new printer with both extra speed and quality? If so, there may be one thing that prevents you from taking the plunge, and that is the cost. Printers don't, as a rule, come cheap.

That's why, when the Citizen 124D came along it looked set to take the market by storm. At £279 it was one of the cheapest on the market. Now, the price has been beaten - and not by a competitor - but by Citizen themselves.

Same printer, same company: but Citizen have dropped the asking figure to a mere £249. It is, they say, one way of tempting PCW owners away from their native 9-pins. With VAT added it will cost the home user £286.35 – which is still a good budget buy.

Citizen confidently predict that the 124D will soon be a best seller within the UK. Sales are already doing extremely well in Europe. The success of the printer in the UK has yet to be proved, but many users are continuing to upgrade their 9-pin printers to the 24-pin variety. With such aggressive pricing, Citizen's model must surely be one of the front-runners. The Citizen 124D printer was reviewed -

A £30 discount on this already budget priced printer could well make it a best-seller

with very favourable results - in the December 1990 issue of 8000 Plus, and the company themselves can be contacted on (0895) 72621.

MAPLE THIEF

If there was one computer printer that could be classed as a household name then it could well be Epson. But, according to them, their well-known title is being taken in vain.

An influx of Canadian imports (such as printer ribbons) appear to bear the famous Epson mark but in fact, they are not actually genuine Epson products. Although they do have different packaging, it is apparently, easy to be misled.

With touching concern, Epson feel at pains to point out that there is a difference between the two.

Anyway, the moral of the story is that if you want the genuine Epson article, then have a good look at the small print before you buy, and check that it states Epson (UK) Ltd. Beware of imitations!

PRICE WAR - PART II

"Hi spec, low cost," say Brother of their new dot-matrix printers. At £319 for a 24-pin printer, and £239 for a nine-pin variety, they are certainly well below the average price. But what about the spec, or in other words, what exactly can it do?

A spokesman for Brother said that the new printers, (known as Brothers 1324 and 1309) avoid the hazards of slow speed and restrictive paper handling. They can cope with a variety of stationery and the 1324 (the 24-pin) can produce a page at the rate of 72 characters per second in NLQ. And when you compare that to 12 characters per second on the PCW's dot-matrix – that's fast!

Brothers in arms (models 1324 and 1309 to be precise), are both low in price and pretty nifty too...

ITS A GIFT!

Computer trainers often need a large number of manuals and programs for their classes. But this presents something of a financial dilemma. Do they fork out the asking price several times over, or worse still, should they flout the copyright laws?

If they are using any software from Cornix software they don't have to do either. A special multi-user licence is the answer to this tricky problem. What's more, colleges, schools and all other places of learning can now get a special deal from Cornix, with up to 40% knocked off the price.

Cornix are known for excellent programs such as Simple Accounts II, Job Estimating and Product Costing, and they aim to be "user-friendly and cost-effective" Cornix have just re-released Card Index, a database they accurately describe as "modest, and easy to use". For more details of this and other Cornix products, contact the company at Tavistock House, 34/36 Bronham Road, Bedford, MK40 2QD. Or call them on (0234) 219969.

PERESTROIKA FOR PRINTERS

Those of you who need to produce Russian script on the PCW9512 will be pleased to hear that they can now do so.

This is thanks to the efforts of a company called WAVE, who provide a Russian printwheel for the 9512. The price is £10.56 and it is one of a stock of 200 types of printwheels.

"We are the only company in England who actually stock every available printwheel for the PCW9512," commented Mark Ralph from WAVE. So, if you've ever wanted to write a letter to Gorbachev, now is your chance. WAVE are at 1 Buccleuch Street, Barrow in Furness Cumbria LA14 1SR (0229) 870000.

Could this man be the PCW's next devotee?

EASY PC

Many PCW users will be familiar with the financial package Total Accounting. The word is that the program is now available for the PC as well, with a few extras such as the facility to print invoices on your own letterhead.

Registered PCW users get a 20% discount on the PC version if they buy before 30th September. The price of the PC program is £99.50, or with the discount £79.50. Derek Rogers Professional Software can be contacted on (041) 3348902.

CLUB NEWS

PCW user groups are one of the best ways to learn about getting the best out of your PCW. Like all clubs, there is plenty of room for chat and informal discussion.

The informal atmosphere engendered by PCW clubs became immediately apparent to the founder members of the Gloucestershire PCW Users Club (no real name agreed as yet), who convened in a Gloucester pub late in February. Five of the seven people who replied to the letter about the club in the January issue of 8000 Plus – where else? – were able to attend the session. A small amount of business was transacted, but the main part of the evening was spent in the more important business of discussing the PCW. Further meetings are planned.

If you are interested Dave Bailes is the man to talk to, and (0453) 828281 is the number to ring.

LONG LIFE CLUBS

Of course, we wish all new clubs well, and hope that they have the continued success which has attached itself to the Hereford Computer Club. Two years old last month, the group goes from strength to strength, with upwards of 80 on their mailing list, 50 of whom are active members of the PCW section. At the moment they are looking into several possible areas of expansion – such as shareware schemes and a small book agency. On top of that they offer helplines, regular news sheets and are constantly looking to make contact with other clubs.

Recent events have included talks on Mini Office Professional and Flipper, and the April meeting (the PCW group meets on the first Wednesday of every month, in what are described as 'comfortable' venues) will be ideal for beginners, discussing creating documents, making templates, mail-merging and inserting

FEBRUARY WINNERS!

February's competition offered to get your business off to a good start, with a range of professional, yet easy to use, Cornix business programs. There were hundreds of entries from our enterprising readers, and three lucky winners were picked from the 8000 Plus hat.

So, here they are; Congratulations to K. Falconer of Kirkaldy, Fife for winning the Simple Accounts II package, also to Maureen Eby of Horton cum Studley, Oxon – a Job Estimating Package is on its way to you, and finally – D.T. Lloyd from Westhoughton, Bolton – you are now the proud owner of a Product Costing program. The answers, by the way, were as follows:
1.Peter Lilley 2. Sir Ralph Halpern 3. ICI 4. A grocer's 5. Anita Roddick

text. Details are available from the energetic David Rose, on 0432 267123 (note the updated telephone number).

APRIL MEETINGS

Elsewhere in the country, the Teesside group were undaunted by February's bad weather, with three new members braving the arctic conditions to join the fun. Their April meeting – which looks like being tropical by comparison – is on the subject of the Mini Office spreadsheet graphics. Details from Gladys Baker on 0642 580018. On receipt of an SAE she will also send a rough map, givng directions to the meeting venue.

The Hampshire and the M25 User Groups also have April meetings planned – the latter will be looking at Protext and DTP applications.

Scotland is well represented by the ScotWest group, who have now started a disc correspondence/tuition scheme. They also run a newsletter – called CHR$(7), which reaches places as far apart as Dunfermline, Edinburgh and Inverness.

And speaking of Newsletters, we are more than happy to receive news and newsletters from any club. We cannot guarantee to answer all correspondence – but we will read it all and try to mention it as much of it as possible in this column. News by the first week of the month, please; which means that if you are planning to write to us wth a contribution for our May issue, then we'll need to receive your correspondence by the 7th April.Thanks!

SOME PLEAS

Les Irving lives in Arlesey in Bedfordshire, and is very interested in starting a club in that area – the counties he mentions are Herts/Beds/Bucks. If you want to get in touch with him, he is at 2, Station Road, Arlesey, Beds. SG15 6RG. Mr Bill Chope from Birmingham is also desperate to get in touch with a club in his area. (021) 449 3155 is the number if you can help. Finally Mr E Buck is in Nottingham, and wants to join a club. Any Nottingham knights in PCW armour can contact him on (0602) 787573.

Many thanks for all the mail we get asking about groups.Again, we cannot guarantee to answer mail personally, but will do our best to make sure that the right people get to hear about your requests. The first thing to do, though, is to consult the Good Club Guide, on page 67 of the magazine, to check if there is an existing club in your area.

STARTING UP

All that remains to be said is that if you are starting up a club, then please let us know, so that we can keep our records up to date, and perhaps give a helping hand.

It would be great to be able to build up a whole network of PCW user clubs across the country, all helping each other! The address, as always, is Club News, 30 Monmouth Street, Bath, Avon BA1 2BW.

United Stations

The PCW and the PC have always been rivals - in the eyes of their respective owners. Can they ever be friends? Karen Donaghay puts forward a peace plan

The PCW and the PC are undoubtedly the Kane and Abel of the computer world. They disagree on every possible issue; with different disc drives, operating systems and keyboards. To make matters worse, their owners then proceed to add fuel to the fire by arguing over which machine is the best buy.

But, battles aside (and it's no secret which side 8000 Plus are cheering for) the two machines do have a great deal in common. They are both designed to help the user - in the home and in the business world - by providing a range of programs to deal with letters, finances, filing and much more besides. So why is it that, despite their similar aims, they can not be used hand in hand? The answer is that age-old excuse; compatibility. Their discs are not interchangeable, and their respective operating systems are about as similar as chalk and cheese.

The resulting deadlock is no problem for PCW users who work in isolation. But for those who from time to time need to use a PC - at work or perhaps for a friend - it can be a source of great frustration.

A report, compiled on a PC at work, cannot be slipped on to disc and finished at home on the PCW. That friend down the road cannot share your mailing list for the golf-club, simply because he uses a PC and you use a PCW. But there are solutions, and we went in search of one that is functional, easy to use, and inexpensive.

Mutual understanding

However hard you try, you cannot fit a PC disc into the 3 inch PCW drive. The PC variety come in two sizes, 3.5 and 5.25 inch: both too large for the PCW. Deprived of a mutually acceptable disc, there has to be some other way of exchanging files between the two machines.

This is where a decision - based on geography, strangely enough - needs to be made. The first option available, for those with the two different machines in close proximity, is to send the information down a cable. The other, if the receiving machine is located elsewhere, is to fit a PC-style disc drive to your PCW.
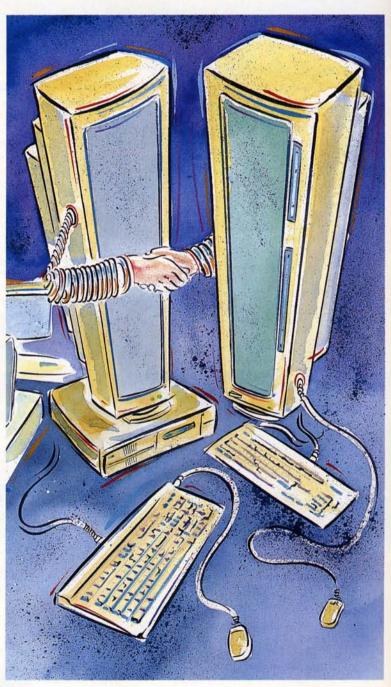
But the choices don't end there. You can opt for Locomotive Software's LocoLink package, that comes with both cable and transfer software. Or you can go it alone and buy a cable and the transfer software from a dealer. Alternatively, if you choose to add a disc drive you can opt for either a 3.5 or 5.25 inch drive.

This month we examine two of these options in detail. Adding a 5.25 inch drive is the more expensive option of the two. LocoLink was picked to serve as a cheaper alternative.

Because LocoLink is designed by Locomotive Software, we tested out both systems using LocoScript files.

Can a letter written in LocoScript be taken from PCW to PC without any transfer troubles? What advantages does the more expensive disc drive offer over a cable link-up system such as LocoLink? And in the end, is it all worth it? These were the questions we set out to answer.

Taking sides

One major drawback of the Pace drive is its sheer bulk. It can account for quite a few square inches on the desk. Here at 8000 Plus, we scratched our heads for a while, and came up with the idea of positioning the drive on its side, more than halving the desk space which it occupies. . We're not called the experts for nothing you know!

The last word

WordPerfect and WordStar are pretty big news for the PC. So if they are the only word processors on offer then don't worry. You can still play ball. If your documents are saved in ASCII, then the Word is your oyster!

The Pace Drive

Adding an extra drive to your PCW is - we must admit - rather costly. But there are advantages. For example, you can have a PC in Timbuctoo, and a PCW on your kitchen table and, as long as you can afford the postage, your 5.25 inch discs can be used by the absent PC, regardless of the distance between them.

The 5.25 inch drive we chose to install was a Pace drive. The price includes a utility program that transfers files from PC discs to the PCW, or vice versa. But more of that later. First - a few words of reassurance.

There is absolutely no need to be worried about adding a drive. If you know how to fit a plug, then that's a good start, because the two processes are more or less the same. In simple terms, the procedure is as follows. Step one is to loosen the screws at the back of the PCW, and take off the plastic casing. Once you are inside, you will find a socket where you can plug in the drive cable. Some drives also have a small power cable, and that should be attached as well. Finally, you put the casing back on, and that's that.

Both of the sockets are easy to locate - but don't just take our word for it. Why not remove the back of your PCW and take a quick look? They should be fairly obvious, but if you are still confused, check back to our step-by-step installation guide in the May 1990 issue of 8000 Plus. Or follow the instructions that come with your disc drive. Either way you will end up with a second drive - referred to forever more as the B drive.

On the right track

Your new disc drive is ready for action immediately. At the back of the drive is a small switch, marked 80/ 40 (meaning 80 or 40 tracks per disc). With the switch set to 80 it will work quite happily, formatting 5.25 inch discs using CP/M's Diskit or the LocoScript command from the [f2] menu. Likewise, loading and saving any PCW files on to the new drive can be done in the old familiar way.

But, although this works fine with discs formatted by the PCW, PC discs are another story. As soon you put a PC disc into the new drive, it makes a tormented, crunching noise and refuses to work at all. The reason is that the PCW will format the disc in 80 tracks, and the PC only uses 40.

Still, there is no need to despair. Instead, pick up the disc that came with the Pace drive. On it is a program called TDOS that allows you to access the 5.25 inch drive - even when it is set to the PC format of 40 tracks.

The basic premise is that, if you can't use a 40 track disc, then copy the file on to a normal A drive disc. Menus are used to guide you through the steps and the idea is that all PC files you need are first copied onto the PCW's A drive. This does of course also work in the

opposite direction, with PCW files copied from the A drive to the PC disc in the B drive. To put this theory to the test we tried to pass a LocoScript document from PCW to PC. Then we conducted a similar test, travelling in the opposite direction.

Going Loco

LocoScript is our chosen testbed and, as you may have gleaned from our pages, the program is available in two forms: one for the PC and one for the PCW. Despite looking similar on screen, they are, in fact, written in completely different ways. This leaves no alternative: you just have to take a deep breath and buy the PC version of LocoScript as well.

Once you have both versions you can then transfer documents from one to the other. We compiled a guinea pig document, called "Story", written using LocoScript 2 on the PCW (and shown in the first screenshot). The first step is to save this document in the usual way on to the A drive.

Then we re-booted in CP/M and loaded the TDOS program. With both discs at the ready - the disc containing "Story" in the A drive, and a PC disc in the B drive - we used TDOS to do an Individual File Transfer (as shown in the second screenshot).
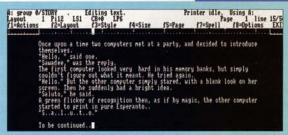
Once the transfer is complete the 5.25 disc is removed and used directly with the LocoScript PC program. When you choose to edit the "Story" file it is automatically converted into PC format (see our third screenshot). As you can see from our fourth screenshot, it looks very similar on-screen to the original PCW version.

But what about a journey in the opposite direction, from PC to PCW? Essentially, it is the same process. You write your LocoScript document on the PC, save it to a 40 track disc and run TDOS to transfer it on to the PCW A drive. One important point, however, is that the document must be saved in ASCII format on the PC and loaded as ASCII text at the other end.

This is for historical reasons. Because LocoScript PCW was written long before LocoScript PC, it does not contain an automatic conversion for PC to PCW. Instead, ASCII functions as the middle ground. It is a standard way of saving files that is used by many other programs too. (For more information on how to Load and Save ASCII files in LocoScript, see the Locus Pocus box) The general impression of using TDOS and a Pace drive is that it is quite a fiddly process (TDOS has a disconcerting habit of getting its drives muddled up). However, it can do what it is supposed to do, and make your PCW capable of communicating with the PC in a highly versatile way. It doesn't matter where the PC is and, software permitting, this method can cope with any type of file under the sun. ➤
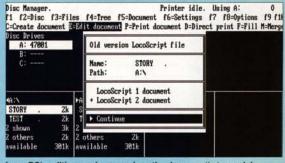
The Pace 5.25 drive, ready to be connected
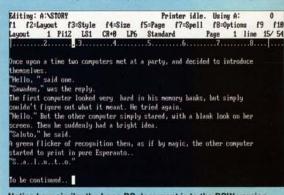
Written on the PCW, this document is ready to move over to the PC

TDOS transfers the LocoScript document to the PC's 40 track disc

Loco PC's editing mode recognises the document's true origin

Notice how similar the Loco PC document is to the PCW version

LocoLink

The good thing about LocoLink is the price: at £34.44 it is within most people's reach. But money is not, unfortunately, the only consideration. On the minus side, the LocoLink cable is a mere six feet in length.

Since very few people have a PC and PCW at such close quarters, this does limit the potential of LocoLink, or any other cable, quite considerably. The other limitation, and this is another serious drawback, is that LocoLink is designed to send files on a one way journey, from PCW to PC. There is absolutely no provision for the return journey, which is a rather odd situation for the user to encounter. They can write a document on the PCW, send it over to the PC, via LocoLink, and continue to write the document. Yet, once complete the document can never be retrieved, for use on the PCW.

In its favour, the LocoLink package is fully comprehensive, containing all you need to make those vital transfers: two programs (one to receive files at the PC end and one to send files from the PCW end) plus, of course, the cable itself. It is impressively easy to slot the cable into the printer port of the PC and the expansion port of the PCW. But, perhaps the most pleasing aspect of

Locomotive's LocoLink package allows you to swap files from the PCW to the PC - but not, unfortunately, in the other direction

LocoLink is the fact that it is very quick and easy to use. The LocoLink programs are inserted into their respective drives and run by typing LLPCW at one end, and LLPC at the other. With such simple commands, very little is able to go wrong.

Soon after, a file can be winging its way towards the PC. It is also possible to specify which drive the file is to be saved on to when it reaches the PC end, and the name of the file can be modified as part of the transfer process.

Speed is of the essence with LocoFile, and things can move even faster by sending groups of file en-

masse down the LocoLink line. All those ending in .DOC, for instance, can be sent by using the command LLPCW *.DOC. This 'wildcard' system, where the variable element of the name is represented by a star, is one that many of you will already be familiar with, as it is widely used in CP/M.

Once they are safely over on the other side, the LocoScript files can be used straight away, making this the easiest transfer we've come across. All you need to do is load LocoScript PC and edit the transferred file. CP/M files can be sent to PC-land by using exactly the same method.

In short, LocoLink does have advantages but for many people they will not succeed in outweighing the drawbacks. For those who don't mind periodically lugging a heavy computer to within cable range of the other, and can put up with the one-way ticket, then LocoLink should be very kind on the pocket and not too testing on your cognitive powers either.

Unfortunately, most people need, and expect, the sort of versatility that, for rather more cash, the Pace disc drive is able to provide. For anyone who uses both the PC and the PCW regularly it is, after all, a small price to pay.

Locus Pocus

So far we have said very little about this month's guinea pig -the well-known and well-loved LocoScript. How do the LocoScript documents fare on this journey from one machine to the other? It is obvious enough that they are transferred successfully, but are there really no modifications to be made at all? Can they just be used in exactly the same way as before?

Well, the answer to those questions is both yes - and no. LocoScript can bridge the gap between PC and PCW more easily than many programs. This is thanks to the fact that LocoScript PC was designed with PCW users in mind, and so the differences were kept to a minimum. However, there are some unavoidable discrepancies and the LocoScript PC manual does list a few potential hiccups.

Printers are one such problem. Your PC and PCW are unlikely to use the same printer - but your documents are set up with a particular printer in mind.

The information about the respective printers is stored in the 'Document Setup'. If you need a printout, you must first adapt these details before you tell the program to print a document.

Another point to watch is PC to PCW transfers. As we mentioned earlier, these involve saving the file in ASCII format. To preserve the typesetting marks it should be saved as a Page image file, not a Simple text file. Incidentally, to translate a file to ASCII using LocoScript PC, the sequence is to select the file from the Disc Management Screen, press [f9], select the Export Text option and press

[RETURN]. Then select ASCII and press [RETURN] again, filling in a new document name when prompted.

On the other hand, to load the ASCII file on the PCW, use the LocoScript command to 'Create a File' and press [f1] (or [f7] in LocoScript 1). Choose to 'Insert text 'and select your ASCII document from the menu.

Committed Loco fans will be glad to know that LocoMail and LocoFile can also make the jump between PC and PCW. This is exactly the same process as used for ordinary LocoScript files, with one notable exception. When a PCW LocoFile is transferred to the PC, it needs to be "squashed" by the PC. Violent though this is, the LocoFile data is not changed in any way. All you have to do is to press [f9], select 'Squash Datafile' and press [RETURN]. ●

The Print Run

Mastering document creation is one thing, but how can you see the fruits of your labours on the printed page? This month, Martin Le Poidevin tackles printing

A document on disc is like a tune on the brain. Terribly frustrating. You know it's in there, and you know that it's good, but how do you convince the rest of the world? A great deal of expertise is needed to get the secret tune into a state in which others can share it. Luckily, printing out the document takes a great deal less training.

Nevertheless, getting a computer to communicate properly with its printer can cost a lot in terms of nerves and coffee. Even in LocoScript you can sometimes find yourself tearing your hair out; in the unprotected world of CP/M matters often get much worse. Luckily, Protext offers a simple printing environment, and a wide range of options besides, to make producing final copy even easier.

If you followed the procedure in the manual when you made a start of day disc, your Protext system should automatically set itself up with the correct printer "driver" when you boot up (for this tutorial, we shall stick to printing with the native PCW printers).

To check this, go in to command mode (by pressing the [STOP] key). At the right hand side of this screen should be the word 'Printer', followed by 'PCW' for the 8000 series or 'PCW9512' for the 9512.

If – for whatever reason – this isn't correct, you can install the correct driver by using the 'PR' command. This has to be issued while you are in command mode, and the PR should be followed directly by the filename of the driver – the filetype is not necessary. For our purposes, the two final forms we will need will be 'PR PCW' (which caters for the PCW8000 series) or 'PR PCW9512' for the 9000 machine.

Waiting for paper

We shall now do some printing. First you will need to either load or type in (and save) a document, which for the moment should be no more than a page long. While in command mode, make sure that there is some paper (A4) in the printer. The printer information bar should appear at the bottom of the screen, when you load the paper. Acknowledge this by pressing [EXIT] in the normal way.

Now type 'P', and press [RETURN]. You will probably be asked by the computer whether you want background printing; choose the 'No' ('N') option for the moment. The

document should now be printed out. That is the basic procedure, but like so many things in Protext it is not the end of the story. There are many niceties which will make your printing easier and more flexible.

For instance, if you want more than one copy of a document, add the correct number after the P – so that 'P 5' will print out five copies of the document. Almost every print command in Protext understands a 'following number' which directs the number of copies to be made.

It will probably be the case that the document which you most often find yourself printing out is the one you are currently working on. However, you will also want to print out ones that are already complete from time to time, and stored safely on disc.

Another addition to the command will do this. This time, the extra information is the name of the file on disc. The name can include a drive specification. For instance, if the document you want to print is MUSHY.PEA which is on a disc currently in the B: drive, and you are logged onto drive A:, the command 'P B:MUSHY.PEA' will print the file, bypassing any screen display.
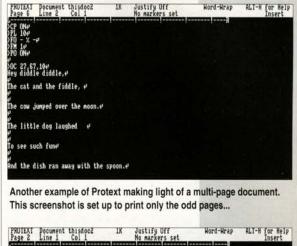
You can also specify the number copies. 'P CORNETTO.ICE 2' will print out two identical copies of the document in question.

Pick and choose

On some occasions, though, it would be more convenient not to have to print out the whole of a document. Perhaps you only want one page, or a part of the document that straddles a page break. If so, Protext will again be able to help.

The command PRINTP (PP for short) will give you the option of either printing or not printing each page. Having issued the command, you will be asked about each page individually. Pressing the space bar will tell the computer to print the page in question; pressing any other key will indicate that it should move on to the next page without printing.

If, however, you want to pick out a piece of text which does not coincide with page breaks, the PP command will obviously not be the ideal answer. The PRINTB (print block, PB for short) command, on the other hand, will do very nicely. This requires that you put markers around the section you want to print (using the [SHIFT] [+] key combination – the computer will sort out

Another example of Protext making light of a multi-page document. This screenshot is set up to print only the odd pages...

...and this one the even pages. The command OC 27,67,10 tells the printer that each sheet of paper is only ten lines long

which bracket opens and closes the marked section when both are in place), go into command mode and type 'PB'.

So far, everything that we have discussed has been valid for both daisywheel and dot matrix printers. But there are one or two things that a dot matrix can do that are not available for the daisywheel. One is the ability to print out in Near Letter Quality (NLQ).

There are several ways of achieving this effect, such as adding the printer control code [ALT][X][Q], or setting the printer bar to High Quality rather than Draft. The simplest means, though, is to tell Protext that you want high quality printout when you issue the print command. The command for this is 'PRINTQ' (which can be shortened to PQ, as PRINT can be shortened to 'P').

This is particularly useful if you want to check a document in draft quality before printing it out in NLQ – for the first printing just use 'P', for the second, once you have made any necessary changes, use 'PQ'.

The 'Q' part of the command can also be combined with other options; for example, if you type in PPQ, Protext will print chosen pages in NLQ, as ➤

Equal portion

There is another means of printing out a portion of text. Again you will have to mark out the text you want using markers (use [SHIFT][+] to define the parameters). Protext has a second text screen, accessible by pressing [ALT][Y]. If you now press [ALT][O], this will transfer the marked text from the original document. Now you can either edit this, or print it out directly.

In the beginning...

If you haven't set up a special Protext start of day disc, the procedure is quite simple. You will need three discs – your CP/M SYSTEM/UTILITIES disc, the Protext master, and a newly formatted disc to copy the program on to. Insert your master disc. If your machine is an 8000 series, type PROTEXT <MAKEPCW and hit [RETURN]. If you own a 9512, type PROTEXT <MAKE9512 and hit [RETURN]. Just follow the instructions on screen. The necessary printer driver, and other system-dependent files will be copied on to your new disc.

above), and typing in PQB will ensure that the marked block in NLQ.

Papering the cracks

Whatever printer you are using, there is one decision to be made when the time comes for printing out – whether to use continuous paper or single sheets. Your Protext master disc is probably set up to expect continuous paper. If you want to tell Protext to employ single sheet printing instead, you must turn the continuous mode off, rather than turn single sheet mode on.

This is an order which must be issued from editing rather than command mode, and it will need to be put at the top of the document in question, along with details of headers, footers and so on.

A text command, of course, requires the '>' at the left hand side of the page, followed by the command. The command to turn continuous printing on is >CP ON, and to turn it off, >CP OFF.

Remember, Protext comes with continuous printing automatically set (although it is possible to change this by fiddling with the CONFIG utility), so to establish single sheet printing you will have to turn continuous printing off!

One situation in which continuous printing will come into its own is when it is combined with yet another set of page printing commands to provide 'front and back' printing.

Last month's document, you will remember, was going to be bound as a book – pages 1 and 2 were to be on reverse sides of the same leaf, and pages 3 and 4 were going to fill the second leaf. In this case, it is not too much of a task to use single sheet printing, turning over each page individually so that page 2 can go on the back of page 1, and page 4 on the back of page 3.

But if the document were any larger, the simple chore would become a major test of patience. It would be far easier to check that continuous printing is installed, and then ask Protext to print out only the odd pages. Then all you need do is turn the paper over, and ask it to print only the even pages.

Learner driver

A printer driver is a file containing the information your computer needs to "talk to" the printer which it is linked up with. Besides the drivers for your PCW printers, your original Protext disc also contains drivers for some other popular printers. These are the EPSON.PTR file (for standard Epson compatible printers), the JUK6100.PTR (for a Juki 6100 daisy wheel printer, and many other daisy wheel printers), and finally a 'simple printer driver', which is what Protext will revert to if no other driver has been installed. If none of these work with your individual printer, there is also a 'SETPRINT' utility which will enable you to create your own driver.

The commands for these are PO and PE respectively. Both have to be put into the text as embedded codes with the '>' prompt. As both >PE and >PO are 'toggle' commands – which means, like the continuous printing command, that they turn their particular function on or off – you will have to tell Protext which state you want them to be in whenever you mention them.

So, when you start printing your document, you will need to turn >PO on in order that only the odd pages are printed on the first run. Put the command >PO ON at the top of the first page, along with >CP ON if necessary, and go into command mode to give your printing command either (P or PQ, with the number of copies required, if you want more than one). Half your document will be printed.

Once finished, reassemble your stationery so that it can go through the printer for the second time. This time, of course, you only want the even pages to be printed, so you will have to change the command >PO ON to >PE ON (not to PO OFF – both PO OFF and PE OFF return you to normal, every page printing). Now go into command mode and type P [RETURN], and your document will be all ready to be bound as a book.

A quick study of our example document this month (see below) will show how the effect is achieved.

Lurking in the background

But what about that mysterious 'background printing' prompt? At the moment we are ignoring it, but since it is there, we might as well find out exactly what it does.

Background printing means that the machine can accept orders while it is printing, rather than having its whole attention directed towards the printing operation. These orders can be about the printing itself – for instance, you can either abandon or temporarily suspend the printing from within Protext itself, and so avoid crossing swords with the CP/M printing environment – or you could edit some other text at the same time as the printing is taking place.

Using the 'printing-while-editing' option is quite simple. The document you are printing must be on disc. Go into command mode, type P or PRINT followed by a space and the name of your document, choose background printing, and the printer will begin to type out your text. Meanwhile, you can continue editing the document which is on your screen.

Hold the front page

Probably the most important thing to know about printing – after how to get it started – is how to stop it. It could be that you have the paper set up wrongly, or that you realise you are printing out the wrong document!

The main problem here is that once the printer has begun printing it definitely wants to finish. Inside the machine is what is known as a 'print buffer' in which the next chunk of text to be printed is stored. When it is thinking that far ahead, the machine does not want to be interrupted.

However, if you do wish to call a halt to the printer's fun, the following sequence will stop the process. First press [PTR] to enter printer mode, which will give you the printer status bar at the bottom of the screen. If all you want to do is to pause in the printing, pressing the [EXIT] key will now resume the operation.

But to stop the printer altogether, the next thing to do is to move the cursor over the word "reset" at the right end of the printer display at the bottom of the screen. Once you have it highlighted, press the [+] button (the printer will give what sounds like a little hiccup), followed by [EXIT] (to leave the printer mode), [STOP],[STOP] for a second time, and AB[RETURN] at the a> prompt which will have appeared.

This sequence will both stop the printing and clear the buffer. This means that if you now want to print a different document, it will not start the printing process by delivering you with a chunk of the old one.

These simple guidelines will help you print out your documents simply and efficiently in Protext. ●

```
Hey diddle diddle,

  - 1 -




The cow jumped over the moon.

  - 3 -




To see such fun

  - 5 -
```

```
The cat and the fiddle,


  - 2 -




The little dog laughed

  - 4 -




And the dish ran away with the spoon.

  - 6 -
```

The final print out of the text created in the screenshots. The pages on the right, of course, are printed on the back of those on the left. Notice also how the OC 27,67 command makes 3 pages out of an A4 sheet

THE WEST OF BRITAIN
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Loco Surgery

This month's LocoPlus begins with Liz Bruce's regular round up of readers' LocoScript queries – and includes a new section for absolute beginners!

Q *I apologise for bringing this old topic up again, but is it possible to have embedded instructions on the SCREEN DISPLAY of a Template? Like many others, I use existing stationery, which in several cases, are forms with various items to be typed in. With the template set out as usual, it is necessary to delete all the various item headings before printing on the form. Otherwise the headings are printed as well. If the headings were not printed, but embedded as, for instance, the word processing codes such as [+]UL are, my problem would be solved.*

The best we have come up with is to put a * before the headings then use Find and Exchange with * and wildcards to exchange the headings for a space. I look forward to seeing if there is an easier/quicker method.

A The 'Find and Exchange' method certainly works, but it is clumsy and difficult to learn. The short answer to your question is no. However, there is a solution. If you buy LocoMail, you can use this to set up a Master which is laid out like your forms, but with the headings put in as [+Mail] prompts. You would then be prompted to enter the information at each heading but the prompts themselves would not be printed. I've produced a short example for you to see, and I think if you have a lot of this sort of thing to do, then a LocoMail package would be cheap at the price!

The best way to see embedded instructions in a template is to set up a document in LocoMail

When you come to 'Fill' the document, this is what you will see on screen...

...and as you type in the text, the prompts will disappear

Q *I wonder whether you could solve a LocoScript problem. It is simply this – when you want to print a particular page out of a large number of pages in a document LocoScript obliges without wasting any time. But there appears to be no way of getting this page on screen,*

if you want to edit it, without having the machine going through the whole previous screed.

Is there some magic formula I am missing out on which could help me get to the page I want to edit immediately, or am I doomed to this inexorable delay?

A It is not clear what version of LocoScript you are using. If you are still using LocoScript 1, the answer is yes, you are indeed doomed. If you are using LocoScript 2 however, a press of [f5] for 'Page' will solve your problems. The first option from the ensuing menu is 'Find Page' and you simply type in the number of the page you want and LocoScript will find it for you, without scrolling the intervening text on the screen. Much quicker and a great relief.

One thing I would mention, it is not a good idea to let documents get too big in LocoScript. They become clumsy and difficult to get around in. I usually make the upper limit about 10 pages and split bigger documents into chunks.

Q *For a long time I have been trying to work out how to print letters, using the 9512, so I was delighted to see the article in your February issue, 'Try It For Size.'*

All went well until the penultimate paragraph which started 'Remember, this is only half the story...'

Can we have the other half please?

A In fact, we'd looked at the 'other half' previously, when we explained about templates. However, I've had so many letters on this subject that it is obviously causing people a great deal of heartache, so here is an explanation of the whole thing, from start to finish.

In Document set-up, select [f5]=Page. Pressing [ENTER] gives a list of paper types

Select the required paper type and press [+]. Make sure 'Use paper type' is selected

The paper you are using is 7" wide by 10" high and the first thing we need to do is to set up a 'New Paper Type' for these dimensions.

You will need your start of day disc (the one you use when you first switch the computer on) and make sure it is not write-protected.

With your start of day disc loaded, select [f6] for 'Settings' then select the second option down, Paper Types. Put the cursor on a type of paper similar to the one you wish to create. The size doesn't matter, but it does make life easier if you choose a type which matches continuous or single sheet, as explained above. In this case, A4 will do fine as our new paper type is going to be single sheet.[EXIT] to the original menu and select 'New Paper Type'.

The first thing you need to do is to give it a name. Let's call this 'Headed Paper'. Do not press [ENTER] after

typing in the name or the machine will save that name with the old values still in it. Just move the cursor down to height and type in the new value. As the printers work at 6 lines to the inch, we work out this figure by measuring the height of the paper in inches and multiplying by 6: 10" x 6 = 60. The width is worked out the same way: 7" x 6 = 42. That will define the size of the new paper.

By the way, the longest side is the height. If you wish to use a piece of paper so it is wider than it is high, turn it round at this stage and set the longer side to height. Later, when you are selecting this paper for use, you would select the 'Landscape' option and LocoScript will automatically adjust the printer to use the long side as the width.

The top and bottom gap should be left alone as if you make them smaller, the printer may not print straight on the

extra lines.We don't need to worry about the paper sensor as it was correct for A4 when we started, so it is correct for any single sheet. (For an explanation of the paper sensor, see LocoScript surgery in February 1991's 8000 Plus.)

Then select 'Create new Paper Type' and press [ENTER]. The screen will display a message explaining that this 'New Paper Type' has to be written to the start of day disc. If it is not, the computer will not know about the new type the next time it is switched on, as only the information on the start of day disc is always available to the program. As you put your master disc in before we started, you only need to press [ENTER]. If you now press [PTR], then [f3] for 'Paper', you will see your new paper type is now on the list of types the printer knows about. If you tick your new type and then select 'Show Paper Type', you will see the values you set.

Q *How do you set up a template for using that type of paper?*

A Sounds complicated, but it's really quite simple. Load the data disc you want to work on using this type of paper and choose the group you want to store these documents in, then press C. When asked for a name, type TEMPLATE.STD. Notice that this has to be exactly correct. You cannot call this TEMPLATE.HED or LETTERS.TMP or anything other than TEMPLATE.STD. When you create a document, the computer hunts for a TEMPLATE.STD to use as a pattern to set up that document and it will not recognise any other file than TEMPLATE.STD for that purpose.
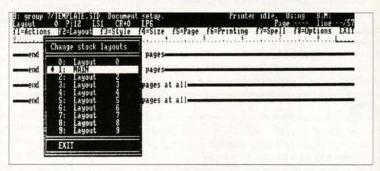
You can see that just looking at a TEMPLATE.STD on the screen tells you nothing about what that template will do, so you must name the group to describe the shape of the documents created by that template. At the disc manger screen, either before or after you have finished creating your template, press [f4]then ENTER and type in the name, e.g. HEADLET.

When the editing screen appears, the first thing to do is select [f1] Actions, then Document setup. To set up this document for your new type of paper, you want [f5] for Page, and then 'Select Paper type'. Your new type will be displayed and you need to put a tick beside it. (Use the [+] settings key, at the bottom left of the keyboard.) This will set the length of page in your document as you will see by the lines available shown at the top right hand side of the screen when you return to editing text but it does nothing to the width. This is because it is up to you to decide how big your margins should be, so now you have to set them. If you know how to change margins, this is no different from any other occasion.

You could just go back to the editing screen and use f2=Layout to change the margins. The problem if you

[f2] from Document Setup gives us the choice 'Change Stock Layouts'. Press [ENTER]

Layout 1 is the one we want; 0 is for headers and footers, and the others are extras

Press [f8] from the editing screen to change the scale pitch

Setting a header zone of 10 ensures that your address will never be printed over

do this, is that if at any time you cut out or delete text from the beginning of your document, you will also delete the Layout code and the margins will revert to what they were before. It is better to alter them in the stock layouts. To do this, press [f2] for 'Layout' from the Document setup screen (you get there through pressing [f1] for Actions, and selecting 'Document setup').

Choose 'Change stock layouts' and you will be given a list of 10. The first one on the list is reserved for headers and footers only. People often try to use this one, and then find that their changes disappear when they go back to their editing screen.

The second layout down, Layout 1 is the default menu for editing text and this is the one you want to change. Select it and press [ENTER].

You can now choose the position of the margins, tabs and so on by moving the cursor along the top line and selecting the relevant menu. One area of confusion here is between pitch and scale pitch.Pitch is the number of characters per inch. I tend to use pitch 10, ten characters to the inch, so as the paper is 7" wide, I have 70 available characters per line. If you use pitch 12 (and this is the default pitch for the 8000 series machines) you would have 12 characters per inch, and 12x7 gives you 84 available characters per line.So, if the left hand margin is set to 1 in pitch

ten, this is 10 tenths of an inch =1". If it is set to 10 in 12 pitch, however, it is only 10 twelfths of an inch and the margin will be smaller.

The margins and tabs in the layout are set in the scale pitch, which is shown at the top right of the screen when you are in Layout mode. You can change the Scale pitch by pressing [f8] for 'Options'. It makes sense to set the scale pitch to the pitch you mainly intend to use in your documents, as that way the text will reach evenly from margin to margin on the screen.

When the scale pitch is different from the pitch you are using in the document, the screen will look odd, as is cannot show you different sizes of character and so does its best by showing you what will be printed on each line: this may appear to go beyond the right hand margin if the pitch you are using is using more characters to the inch, and stop short of the margin if it is using less.

It's nothing to worry about, it will print out correctly but it is confusing if you don't know why it is happening.

To set the right hand margin one inch from the side of the page, in pitch ten, we would put the cursor on 6, (70 available characters – 10 available characters at 10 characters per inch) press [f1] for 'Margins' and select 'right hand margin'.

We can also put in any tabs we may

want. Using this template will now print out perfectly on our new paper.

However, we can be a little more subtle yet. This paper is headed note paper, with a printed address at the top. We can measure where that address sits and in this case it reaches two and a half inches down the page. If we go back to the Document setup and back to f5=Page, then select Page layout, we can set this into the header zone, so making sure the address will never be printed over.

You can see we already have 6 lines in the top gap, so that is one inch at the top of the page which will not be printed on anyway. We need to go down another inch and a half, and a fraction more to allow for the paper not being quite straight in the printer.

One and a half inches at six lines to the inch is 9 lines, plus one for luck is ten. We type 10 into Header zone and press [ENTER]. We could also put space into the footer if we wished but this paper does not need it. See the settings we have made in the screenshot on the previous page.

All you need to do now is [EXIT] from the template and remember to name the group it's in if you haven't already, then go ahead and create documents. Anything now created in that group will be set up identically to the template allowing us to print perfectly on our new paper.

Q *We have a PCW8256 at school and I would like to make a few sheets of tutorial notes for the children to refer to when they are using it. I very much admire the way your* *column is illustrated by pictures of what the screen is showing; is there any way I can do that? Or does it need a special camera or a link from the computer in some way?*

A It couldn't be simpler. All you have to do is make sure there's paper in the printer, then press [EXTRA] and [PTR] and the printer will print out exactly what is on the screen. This is commonly known as a screen dump (or sometimes, though not strictly accurately, as a screen shot) They certainly make information a lot clearer.

A Beginner's Guide to the LocoScript Disc Manager - Part 1

Some of you may be using LocoScript for the first time, and may find that not all of the queries dealt with in our regular 'surgery' are relevant. So, this month we start with the basics – the disc manager screen. This is what you will see when you first load your LocoScript start of day disc into the PCW.

The first thing to note is the 'status' line – the top three lines of the screen. These will always tell you where you are, where you can go and what you can do from that point in the program. This may seem obvious, if you already know that, but many people pay little attention to what the top of the screen is telling them and don't realise just how helpful these lines can be.

Let's look at the top line, from left to right. In the middle, the words 'disc management' tell you that you are in the part of the program where you can gain a general overview of things – and these things are as follows.

Along to the right you are given the 'status' of the printer. As you have just 'booted' the PCW, then the printer will be indicated as being 'idle'. The last of the top line messages is the indication of which of the three possible drives

```
                         Disc management.            Printer idle.  Using none.
:=Create new document         E=Edit document        P=Print document   D=Direct printing
1=Actions  f2=Disc  f3=File  f4=Group  f5=Document  f6=Settings f7=Disc change f8=Option
rive A:                       Drive B:        empty      Drive M:
73k used   0k free  13 files   0k used   0k free  0 files  4k used  312k free   2 files
group 0 17831   group 4   0k    group 0   4k   group 4   0k
group 1    0k   group 5   0k    group 1   0k   group 5   0k
group 2    0k   group 6   0k    group 2   0k   group 6   0k
group 3    0k   group 7   0k    group 3   0k   group 7   0k

A: group 0   13 files M: group 0    2 files
   0 limbo files           0 limbo files
LOCOCHAR.2    25k
LOCOCHAR.3     0k     2 hidden   4k
LOCOCHAR.BAS  14k
LOCOCHAR.KEY   1k
MATRIX .$$$    0k
PHRASES .STD   1k
READ   .ME     6k
SETTINGS.STD   1k
    5 hidden  117k
```

LocoScript's opening screen is known as the Disc Management screen. This month, we discover the roles of the three lines at the top

are currently in use. Ours says "Using none", and will continue to do so until we tell it otherwise. If you then go on to edit a document, a drive indicator will appear. This will read A, B or M, the last of which is the PCW's own built-in drive.

The middle line shows you what can be done from this disc management status. From left to right, we have the following. 'C=Create new document' allows you to make a new file, 'E=edit document' allows you to work on a file that already exists.'P=print document' lets you print a file straight from the disc management screen,

rather than going in to the actual document and choosing 'save and print' as you [EXIT] from the file. 'D=direct printing' allows you to use the computer as a typewriter. You need to be inside a document to make use of this feature, so either press 'E' to 'edit an existing document', or 'C' to create an existing one. Make sure that you have a piece of paper in the printer, then type your text on the screen. Now, every time you press return, the text is printed on the paper and the screen clears.

If you have LocoMail installed on your start of day disc, there will be two additional messages in the status lines. One is 'F=fill' which allows you to fill a previously prepared LocoMail document, and the other is 'M=merge', which you would select to merge a previously prepared LocoMail master with a previously prepared data document. Finally, the third line tells you what each function key will do. The function keys (numbered [f1] to [f8]) are located on the right hand side of the PCW8000 series keyboard, and on the left hand edge of the 9512 keyboard. Next month, we will be looking at those function keys in more detail.

Address Sense

In the second of our special LocoFile tutorials, Karen Donaghay helps you to plan and set up a comprehensive customer record for a small business

Unless you live in a hermit's cave, surrounded by an impassable mountain range, the chances are that you - like everyone else - will have an address book. And your personal contacts may be just the beginning. Business folk will need to keep tabs on where their customers can be found, clubs have to know who their members are; in fact, almost every organisation has its own variation on the theme.

Most address books seem to get fuller with each passing year, and in most cases, increasingly less legible. Soon you could find that your trusty list of addresses is obscured by a multitude of red lines and double entries. This is one of the clearest cases where the use of a database such as LocoFile can completely streamline business - or domestic - administration.

And what's more, setting up an address book in LocoFile is extremely straightforward. This month, we've looked at that very task, and have defined the process in six easy steps - from start to finish.

And if you are still wondering what is wrong with your old address book, then think on this. You can wave goodbye to all those untidy corrections and dog-eared pages. Instead, you can welcome, in their place, features such as an automatic searching facility, the possibility of adding other information - birthdays, anniversaries and so on - and the means to sort your addresses into towns or any other category.

But more of that later. First, let's look at the basics. For our example, we chose to set up a company address book. It lists customers, and their addresses and leaves a space for comments and extra information - we've chosen the credit limit of each individual. You can of course, adapt these categories to fit your own needs.

Step 1: Initial planning

It's very easy to scoff at those careful souls who plan everything out on paper before setting a finger on their keyboards. But, nine times out of ten, this forward thinking pays off - giving clear results very quickly. For instance, our customer addresses were originally kept on an index card, as shown in the illustration. As you can see, something as simple as untidy handwriting can make information very difficult to find at first glance. It is also distinctly unprofessional.

To convert this into LocoFile form you need to decide how how many fields you need, how big these will be and where they are best positioned.

1 Title (4 characters)
2 Name (20 characters)
3 Address (40 chars x 5 lines)
4 Credit Limit (10 characters)
5 Comments (40 characters x 2 lines)

We decided on five fields for our example: Title, Name, Address, Credit Limit and Comments. Deciding the size of each field needs a touch of foresight. The largest Credit Limit is unlikely to be more than a six figure number, so a space of seven or eight characters leaves ample room. On the other hand, the Comments which you add to each record could be either non-existent or very long-winded, so this field needs as much space as possible. The exact dimensions of each field are shown, in terms of characters, underneath the diagram.

Don't worry if you do make mistakes: they can be corrected. Planning is simply one way of getting it right first time.

Step 2: Starting out

The next stage is to create the "master card" - a standard template that allows you to fill in the address details for your different customers, without having to go to the trouble of setting up the layout for the card each time you wish to use it.

With LocoFile loaded, begin by pressing [f1] and scroll down to the 'Create LocoFile' option. Then press [ENTER] and choose a name for the file. We called ours Customer.DAT. If you give all of your LocoFiles the suffix .DAT, it makes them easy to identify. Press [ENTER] and the blank

The mastercard; the tiny box is the location for the 'title' field

card will appear on the screen. Use the arrow keys to move the cursor into the top left hand corner.

Then, move (carefully) fifteen spaces to the right and press [+]. Lo and behold, a small box appears. It should look like the box in the top left of our screenshot. This is where the customer's title is going to go.

To expand the box, move the cursor three spaces to the right. This gives you a box big enough to write Mr, Mrs or Miss inside, which is exactly what we want. We have allowed a maximum of four characters for this field.

Step 3: Layout details

To fix the tiny box in position, press [ENTER]. You can then type in the name of this field, which we have called Title. Another menu immediately springs up, and this time you need to scroll down to the line that says 'Place at 11 o'clock'. What this does is to determine the location of any text in relation to the field you have just set. The field is denoted by the tiny white box - or blob - which we saw in the previous screenshot, and LocoFile uses a clock face to define positioning. So, we want the text, 'title', to be placed to the left of the field location (see the screenshot in step 5 to check this). This is 9 o'clock, so

```
A: group 0/DATAFILE.002  Datafile set-up.            Printer idle.  Using A:  M:
0 records in    4k file (6% free)           Item: None          Col:19/60 Line:
f1=Actions   f2=Index   f3=Item   f5=Card   f6=Printing   f7=Extract   f8=Options
161k used  1      │ Name:  Title                        │                e  3 i
 group 0  161     │                                     │             roup 4
 group 1    0     │   Hide the name                     │             roup 5
 group 2    0     │ ✓ Show the name                     │             roup 6
 group 3    0     │   Place at  9 o'clock               │             roup 7
A: group 0        │                                     │
  0 limbo         │   Item width              4         │
DATAFILE.00       │   Item height             1         │
DATAFILE.00       │                                     │
LOCO    .SS       │   Column                 16         │
LOCO    .BA       │   Line                    1         │
MATRIX  .HS       │                                     │
NEWGRAB2.CO       └─────────────────────────────────────┘
PHRASES .ST
SETTINGS.ST
SYS00208.FID   2k
    7 hidden  133k
```

LocoFile uses a clock face to define the position of text by a field

change it by typing in 9 followed by [ENTER], and this completes the alterations. The word Title will, as a result, be displayed to the left hand side of the box. The other options can be left as they are. The 'Show the Name' option is highlighted, meaning that the word Title will actually be printed on-screen. You can enter up to four characters in the box since the Item Width is four. Item height is 1 as only one line is used for the title box. Finally, the last two settings refer to the position of the box on the screen, in other words it begins at line one and in column 16. Press [ENTER] to see the effect on the card layout.

Step 4: Completing the layout

he Surname field is added in the same way. Move the cursor beneath the first box - that is, the one we have just created for the 'title' field, and making sure that one line is left free, press [+]. Then press [ENTER] and type in the name of this new field, 'Surname'.

When the full settings menu appears, scroll down to the fourth line and set it to 'Place at 9 o'clock' and press [ENTER]. This time there is one more adjustment to make. You should set the Item Width to 20 and press

```
A: group 0/DATAFILE.002  Datafile set-up.            Printer idle.  Using A:  M:
0 records in    4k file (6% free)           Item: None          Col:16/60 Line:
f1=Actions   f2=Index   f3=Item   f5=Card   f6=Printing   f7=Extract   f8=Options
161k used  1      │ Name:  Surname                      │                e  3 i
 group 0  161     │                                     │             roup 4
 group 1    0     │   Hide the name                     │             roup 5
 group 2    0     │ ✓ Show the name                     │             roup 6
 group 3    0     │   Place at  9 o'clock               │             roup 7
A: group 0        │                                     │
  0 limbo         │   Item width             20         │
DATAFILE.00       │   Item height             1         │
DATAFILE.00       │                                     │
LOCO    .SS       │   Column                 16         │
LOCO    .BA       │   Line                    3         │
MATRIX  .HS       │                                     │
NEWGRAB2.CO       └─────────────────────────────────────┘
PHRASES .ST
SETTINGS.ST
SYS00208.FID   2k
    7 hidden  133k
```

Create the remaining four fields in the same way...

[ENTER]. In step 3 we set the this value by taking a shortcut and 'stretching' the box, but for larger fields it is much more precise to actually type these values in. Finally, to see the results, press [ENTER] again.

The other fields can be added in the same way. The Item Widths and Heights are set as follows: Address is set to 40 characters wide and 5 lines high, Credit Limit is 10 characters wide and 1 line high and finally, Comments is 40 characters wide and 2 lines high.

Step 5: Creating the index

The final layout should look like this. But there is one extra feature to set - an index.These are not compulsory, but it would be a great shame not to include at least one. They are one of LocoFile's most useful features. Like a manual card-index, they allow LocoFile to sort the entries into alphabetical or numerical order.

Again this is common sense really. When you look up a telephone number in the telephone directory, you look for the surname. Likewise, with our address file, the obvious choice of index is Surname. This is the piece of information that you

```
A: group 0/DATAFILE.002  Datafile set-up.            Printer idle.  Using A:  M:
0 records in    4k file (6% free)           Item: Comments      Col:16/60 Line:
f1=Actions   f2=Index   f3=Item   f5=Card   f6=Printing   f7=Extract   f8=Options
161k used  1        Title ....                                      e  3 i
 group 0  161                                                    roup 4
 group 1    0       Surname ................                      roup 5
 group 2    0                                                     roup 6
 group 3    0                ................                     roup 7
A: group 0
  0 limbo           Address ................
DATAFILE.00
DATAFILE.00
LOCO    .SS         Credit Limit ..........
LOCO    .BA
MATRIX  .HS         Comments │................
NEWGRAB2.CO                  │................
PHRASES .ST
SETTINGS.ST
SYS00208.FID   2k
    7 hidden  133k
```

...and the final layout of your master card should look like this. Notice that the comments field has plenty of room for text entry

are most likely to know already, and indexing this field will speed up the search considerably. To set the index, press [f2] for Index, then [ENTER]. The only option displayed is to 'Create New Index', so press [ENTER] again. The various fields will be displayed and you move the highlighted bar over Surname. Select this field by pressing [+] and a tick appears next to it. You'll see an option called 'Alphabetic Standard' which, should already be pre-selected with a tick. Press [ENTER] then [EXIT] followed by [ENTER] This installs your index and takes you back to your card layout.

Step 6: Using the address file

Once you are satisfied that the layout is to your liking, you can start filling in the entries. Simply press [EXIT] and wait for a few seconds while the layout is put safely on disc. You are then dumped unceremoniously into your first record. Filling in the entries shouldn't be too taxing. You just move the cursor to the chosen spot and type. Alternatively, you can speed through the boxes by typing text in, and pressing [RETURN] to get to the next one. Our first record is shown in the screenshot. If you want to add more, and we're sure that you will, the next record can be typed in by pressing [f1] Create New Record. The simplest way of moving around this new data-land, is to press

```
A: group 0/DATAFILE.002  LocoFile.                  Printer idle.  Using A:  M:
Index: Record number       Unique       Item: Comments      Col:35/60 Line:
f1=Actions   f2=Index   f3=Item   f4=Print   f5=Goto   f6=Find   f7=Extract   f8=Options
161k used  1    Record:1                              Changed    e  3 i
 group 0  161      Title Mr                                   roup 4
 group 1    0                                                 roup 5
 group 2    0      Surname Carlieone                          roup 6
 group 3    0               Poughkeepsie,                     roup 7
A: group 0                  NY
  0 limbo         Address
DATAFILE.00
DATAFILE.00
LOCO    .SS       Credit Limit N/A
LOCO    .BA
MATRIX  .HS       Comments │Well-connected but volatile character.
NEWGRAB2.CO                │Treat with cuation.
PHRASES .ST
SETTINGS.ST
SYS00208.FID   2k
    7 hidden  133k
```

With all the fields set up, you can save your layout to disc, and then go back and make the relevant text entries for each customer

[PAGE] or [ALT][PAGE].

The indexing system which we set up in the previous step is easily demonstrated by the command 'GoTo'. Press [f5] and type in the surname you want to find. The entire address appears on the screen in a flash. When you have added all the records you need, the whole database is saved by using the [EXIT] key. Another way of saving the layout is to [EXIT] before you add any addresses. If you then make a copy of the layout then re-load it using the Run LocoFile command, this allows you to keep an empty file containing the card layout, but not the information. Very useful when you intend to use the same layout for say, customer details and personal addresses.

A Touch of Class

Teqniche's new keyboard for the PCW promises to be a revolution. So is it a Steinway, or a Stylophone? Rob Ainsley taps in to some pleasant surprises

Teqniche PCW102
Pan Euro
(0925) 234170 ● £90.85

Though the QWERTY arrangement of alphabetic keys has become standard, the layout for the exotically named impedimenta required by computer keyboards - [RELAY] keys, [RETURN]s, [PASTE]s, [EOL]s, and others that look like railway junctions or waffle irons - is far from standard. Imagine the potential confusion if the same problem afflicted concert pianists: "Sorry, Mr Liszt, but on this one you'll find the E flats between the As and the Bs, and the soft pedal is marked CTRL and is over to your far right hand side..." It simply wouldn't work.

When Amstrad designed the original PCW8256, they were working to rather a tight budget, and the keyboard was one of the corners they had to cut. To be fair, they did an extraordinarily good job in getting a cheap keyboard that is very usable; treat it with care and it will last many years. (After four and a half years, the 8000 Plus fleet is wearing well). One way of keeping the costs down seems to have been by cramming all the keys as close as possible; after all, if there's no

Board meeting

A PCW 9512 keyboard can be used on a PCW8256 or 8512 - just plug it in and away you go. The opposite applies too, though as the 8000 keyboards are undoubtedly inferior to the 9512's, it's not something you'd be likely to do.

standard keyboard, then you may as well go for the most economical arrangement that you can.

This was a drawback remedied to a great extent on the PCW9512, with its three banks of keys, but the PCW8000 keyboards are a little uncomfortable to use, with more keys than Florida, all doing an impression of passengers on a Tokyo rush hour train. Aim for [RETURN] and you can easily press [f5] instead, often with irritating consequences (particularly if [f5] is a function key command to 'erase all files'); the left cursor can turn into [f3]; [CAN] can turn disastrously into [CUT].

Other users talk somewhat disparagingly of the clankey and rattley nature of the native keyboard, and its robustness has also been challenged. These are less fair criticisms - think of the tremendous bargain your PCW is - but they are still made.

Nevertheless, PCW users have been wondering for ages why some enterprising company hasn't stepped in and provided an alternative. Now Teqniche have - and their product looks to be a winner. Essentially, the new PCW keyboard addresses these three problems:
1. Key layout
2. Key spacing
3. Key action
- and solves them all well.

The first - and most obvious thing - is that the unit is rather bigger than the native keyboard. The basic keys - from [STOP] and [TAB] and so on down the left to [RETURN] on the right - take up the same space, yet seem deceptively larger, probably because of the two colour system used to separate the alphabetic keys from the other keys and the smaller labels. The rest of the keys are sensibly grouped in clearly separated sections, making the whole unit about 20% wider and 20% deeper than that on the 8256/8512. The fact that the layout is different will mean some acclimatisation for long-term PCW users - a day or two maybe - but less trouble for more familiar to users of other computers, especially typical office PC compatibles, whose layout it more broadly resembles.

For example, the delete-left and delete-right keys are not together as on the PCW, but are in different rows (and aren't marked the same - one has the word "Del", the other just an arrow). The numeric keys are over by themselves on the right, with the cursors - which on the PCW keyboard double as numeric keys sometimes - are in a different bank still. Function keys are in a row of eight, marked [F1] to [F8]: no sharing two to a key as on the PCW, so good for anyone who uses function-key intensive applications (LocoScript springs to mind). [EXIT] moves up to the top left, while [CUT], [COPY] and [PASTE] are in a group of their own at the top right. It's much more sensible this way: if you miss the key you're aiming at by one you won't go far wrong, as you can on the PCW keyboard. All those "LocoScript keys" - [EOL], [EXCH], [DOC] and so on are there too, in a separate group again. The settings keys, [+] and [-], are larger than on native keyboards - a very sensible move given their extremely frequent use in LocoScript.

Key action is also quite different from the native keyboard: more clicky than springy, as it were. Different users prefer different responses, but the click seems to be the preferred type by most users that we have come into contact with. Teqniche's unit is certainly not silent, but is mezzo-piano to the PCW keyboard's forte.

Teqniche are keen to point out in their adverts that the two "home" keys for touch typists - J and F, the keys that sit under the index fingers at rest - have

---

Those shift states in full

There are various shift states that a PCW can have. The most obvious is SHIFT LOCK, selected by the key of that name, when (for example) pcw8256 would come out as PCW*"%'. However, there are others, which can be selected unknowingly and cause baffling results. Teqniche's keyboard has a special indicator panel that shows you what key state you are in, which should cause less bafflement; a summary table is given here.

In Numeric lock, many PCW keys change function: [EOL] produces 4, for example, instead of going to the end of a line. The facility is there to help the entry of numerical data. Teqniche's keyboard has a separate numeric keypad which imitates the PCW's, but also has a separate bank of cursor keys and [EOL] keys and so on, so the change of function initiated by Numeric lock doesn't rob you of cursor movement, as it does on the PCW.

SHIFT STATE	TURNED ON/OFF BY	EFFECT	PCW KEYBOARD DISPLAY	TEQNICHE KEYBOARD DISPLAY
Shift /Caps Lock	[SHIFT LOCK] on PCW	pcw8256 becomes PCW*"%'	Red light on SHIFT LOCK	Green light on Caps Lock indicator
	[CAPS LOCK] on Teqniche	pcw8256 becomes PCW*"%'		
"Postcode" lock	[ALT] [ENTER]	pcw8256 becomes PCW8256		
Numeric lock	[ALT] [RELAY] on PCW	pcw8256 becomes pcw8256		Green light on Num Lock indicator
	[Num Lock] on Teqniche	but [RELAY] becomes 0		
		cursor left becomes 1 etc.		
Scroll lock	[ALT] [RELAY] on PCW	pcw8256 becomes pcw8256		Green light on Scroll Lock "
	Num Lock] on Teqniche	but keypad numbers produce		
		[RELAY], cursor left/right etc.		

small raised bars on them to guide the fingers. It's a device that is useful for those learning touch typing but which isn't to everyone's liking; after prolonged touch typing they can be an irritating intrusion. However, the choice of a bar at the bottom of the keys (rather than a raised spot in the middle, as on some keyboards) seems reasonably avoidable if you find it so.

An interesting idea is the "shift state" indicator panels on the top right of the keyboard: three lights that glow to show whether you're in Num lock, Caps lock, or Scroll lock (see the box).

The only things that can be said against the keyboard are the distance of [RETURN] from the alphabetic keys - there are three keys between it and the L, requiring a giant leap for the little finger - but this is a choice forced on Teqniche if they don't want to stray too far from the native key layout; and fact that the [SHIFT] key on the left hand side isn't as big as that on the PCW, and has the [EXTRA] key next to it; it can take a bit of getting used to, and you'll probably press a few [EXTRA]s by mistake while changing.

Another bonus is the accuracy level for high speed typing. The PCW keyboard is prey to some strange effects at high speed. Type 'PCW' very quickly, and it becomes 'PC?W' even though you didn't touch the ? key. Similarly, 'more' becomes 'morbe', 'list' becomes 'liwst' and so on. These effects do not appear on the Teqniche.

A thoughtful addition to the Teqniche keyboard is the pair of metal legs that can be sprung out from the bottom of the unit to raise the angle of the keyboard on the desk. Touch typists will be familiar with the term RSI: repetitive strain injury, the damage that can be done to typist's hands by over-use in an uncomfortable typing position. Being able to raise the keyboard so easily will not completely prevent RSI - that is best done by frequent breaks from typing, say every 15 minutes, and a perfectly comfortable hand position to start with - but it certainly helps.

The most important question - how long the keyboard will last compared to the PCW - is obviously one that can't be answered here. The unit certainly feels substantial. It is guaranteed to "one million individual keystrokes"; presumably this means until one million letter Es, which will occur at roughly the two million word mark - the equivalent of about 4,000 one-page business letters, or something like 20 novels.

At £79 plus VAT, the cost of a Teqniche keyboard is about the same as a replacement PCW one. If you're happy with the keyboard you have, fine. The Teqniche is not going to revolutionise your life. But it is certainly more thoughtfully designed, more comfortable to use, easier and less frustrating than the one you have already. It's very sensibly priced, and it is, indisputably, streets ahead of the 8256/8512 keyboard - and quite few houses in front of the 9512's.

The Teqniche keyboard – in detail

The Teqniche keyboard has eight individual function keys, as opposed to the native keyboard's four. This saves having to use the [SHIFT] key every time you want to access a function whose number exceeds four. This will be particularly useful in LocoScript; for example, if you are in the document editing screen, you can select f5=Page, f7=Spell and f8=Options with the greatest of ease.

Another useful addition to the new keyboard is the ability to produce fractions such as a half, a quarter and three quarters. The PCW's native keyboard has a half key, but the other two are accessed by pressing [ALT] [2] and [ALT] [6] respectively. The Teqniche saves you having to stretch fingers between the [ALT] key and the elusive top row. This function will be invaluable if you own a millinery business!

Here's a boon for all would be touch typists - a small ridge at the base of the letters f and j. These two keys are the official location for the left and right index fingers if you are using the so-called home keys. Some PCW typing tutor programs use coloured stickers to help you find the home keys; this is a neater solution, and should get you out of the habit of constantly looking down at the board.

The arrangement of these keys has both good and bad points. The arrow is the [SHIFT] key, which is further away from the main keys than its equivalent on the native PCW board, and if you want to reset the machine using [SHIFT][EXTRA][EXIT] (Flipper owners take note) you need to have a very flexible left hand. You can of course use the second [SHIFT] key to the right of the keyboard. The often used [+] key, however, is comfortably enlarged.

This is not visible from the main picture - because it is situated underneath the keyboard. This is one of a pair of metal feet, which are located at the top right and left undersides of the board. There are three 'settings' to experiment with, and the rubber pads ensure that the board doesn't slip around on the desk. If you don't require the position of the board to be raised, then you can click them neatly away.

Numbers are easily accessed with a 'dedicated' numeric keypad. It has the layout of a standard calculator, and has the other mathematical signs conveniently close to hand. Pressing [Num Lock] ([ALT] [RELAY] on the PCW) disables the cursor keys - but you can still use them from a separate keypad just to the left. However, the [RELAY] key cannot then be used as such.

Teqniche PCW 102

Pluses

▲ Less cluttered than PCW keyboard
▲ Smooth clicky action
▲ Keys in sensibly grouped separate banks
▲ Useful Indicator lights to show shift state
▲ Smart and very professional look and feel

▲ Familiar for users of PCs
▲ Separate numeric keypad
▲ Eight function keys, not four
▲ Good value
▲ No intrusive letters at high speed (the 'PC?W' effect)

Minuses

▼ Different layout needs a little acclimatisation

▲ [SHIFT] key on left hand side is small and can be confused with [EXTRA]

Ease of use	5/5
Design	5/5
Performance	4/5
Features	5/5
Value for money	19/20

Loco Promotion

LocoScript PC is still something of a youngster in the world of PC word processors. Steve Patient takes a look at the program in its newly upgraded form

LocoScript PC
Locomotive Software
(0306) 740606 ● 125 + VAT

The transmigration of LocoScript from the PCW to the PC altered it very little - to the satisfaction of some and the irritation of others. Perhaps irritation was in the ascendant since Locomotive have moved relatively quickly to upgrade the PC version and have now released version 1.5. There are several reasons for the upgrade, among which Locomotive's discovery that 15 percent of those buying it are brand new users

```
Task 2: Editing: C:\LS.PC\TEXT\LS.000      Printer idle.  Using C:        N
f1   f2=Layout   f3=Style  f4=Size  f5=Page  f7=Spell  f8=Options  f9  f10
C:\LS.PC\TEXT\EGA.DOC ──────────────── Page   4 line  28/ 54
0........|.........2.........3.........4.........5.........6.........7.|.......
      (BL)=20 Select alternate print screen routine↓
      ↓
   (AH)=13 Write string↓
      This is the same as documented in the PC/AT Technical
   Reference↓
      BIOS listing (but is new for non ATs).↓
      ↓
   (UA RE I):↓
      ↓
Layout    1  Pi10   LS1   CR+0   LP6  ─────────── Page   1 line  22/ 54
0........|.........2.........3.........4.........5.........6.........7.|.......
   effort to provide the kind of features PC users expect from a
   word processor in lspc 1.5. ↓
   ↓
   No doubt the first difference that will strike users of the
   original is the increased speed of moving through a document.
   Paging down now does what you would expect, it puts you on
   the next page - without forcing you to look at all the lines
   in between.  ↓
   █
```

Two file editing is now possible in LocoScript PC, but you lose the ability to merge other files

rather than ex-PCW users.

LocoScript PC 1.5 costs £125 or, alternatively, you can upgrade from the original (£15 if you bought version 1.0 after 12th November 1990 or £35 otherwise). It comes with the same set of manuals as the original version: tutorial, reference guide, printer guide, installation guide and the integrated database and mailmerge manuals. A slim pamphlet describes the additions and alterations made in version 1.5. If you buy the upgrade you only need the discs and the upgrade pamphlet.
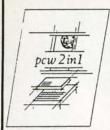
Once the new improved Loco PC is installed, it is instantly noticeable that 'Paging' down does what it always should have done - it puts you on the next page - without forcing you to look at all the lines in between. There are few users who will not welcome the extra speed when moving through documents.

The other major change in the program is to concede that users

occasionally wish to work on two documents at once - a wish addressed and mastered in the world of the PCW by the invention of Flipper.

In the new version of LocoScript PC, two files can be viewed alternately, full screen, or simultaneously, via a split screen - but at a price. While two files are active you cannot merge other files into them. Similarly, while you can edit the same file in both windows Loco PC regards them as separate - changes in one are not then reflected in the other.

Tongue in cheek

Support for foreign languages, including ancient Greek and Cyrillic, has always been a strong point in LocoScript. However, remembering just which key produces what symbol is not easy. Now, though, there is a helpful keycap display. Keycaps put a picture of the QWERTY part of the keyboard on the screen over a document. Function keys select the particular supershift required and, hey presto, the keys show the relevant characters. The idea originates from the world of the Apple Macintosh.

Paper chase

Locomotive Software have always said that their word processor should be as much like paper as possible, so clearly regard the printed word as the proper end result of all that effort at the keyboard. It was therefore unfortunate that laser printers, so important in the PC world, were poorly supported in version 1.0 of Loco PC. Now, thankfully, there is support for a wider range of laser printers along with HP font cartridges and downloadable fonts. LocoScript PC 1.5 will make as many fonts as you like - though the old limit of ten per document still applies.

One gripe PC program reviewers had with the original LocoScript PC was the retention of the Disc Manager screen - a paradigm that worked well on the PCW with its single level of directories, but sat poorly on the hierarchical directory structures of the MS-DOS on the PC. Once again, Locomotive have missed an opportunity to alter it and the changes made are evolutionary rather than revolutionary.

The big improvement is that LocoScript PC will now handle directories as if they were files - you can delete, copy or move a directory (and its sub-directories), at will. Also, you can use file filters (or wildcards) to specify

which files are displayed and acted on within a directory. There is also a very useful file search command. It will find a file and leave the disc manager screen positioned over it.

Jumping jack

On the PC, many users have become used to having programs pop up over other programs, a feature that version 1.0 of Loco PC didn't get on with at all well. The new 'Enable TSR' mode, for those who must use pop-ups, knocks out a lot of the keystroke interception done by LocoScript PC so that the other program can get at them (and thus know its time to put in an appearance). The price for all this is that it forces you to run in standard 25 line text mode. This has the disadvantages that effects like italics (and special characters) are not shown on screen and less lines are visible. On the other hand the screen update is faster.

As with the original release LocoScript PC 1.5 runs in a variety of graphic screen modes. The default is still 30 line graphics mode on video adaptors that support graphics (much the same in appearance to the PCW). For those with Hercules monochrome cards a 90 column mode is supported. Others get the usual 80 column PC standard. On the plus side you also get text effects, like bold and italics, displayed on screen.

There are few changes to the integrated database that comes with LocoScript. The main one is the ability to import CSV (comma delimited files) from other programs - the only way you're ever going to get all of Uncle Harry's wine list, that he currently maintains on a Lotus 1-2-3 spreadsheet, into a form that LocoScript can readily make use of.

To sum up, LocoScript PC 1.5 is better than version 1.0, and very good value for money. There are now even more good reasons for moving from the PCW version to the PC version, and the process should be virtually painless.

Some will argue that LocoScript PC still looks fussy and quaint alongside some of the other rather sleek and sophisticated PC word processors available. But for anyone considering moving from the PCW to the PC, and wanting to take a capable, user friendly companion with them, then LocoScript PC, in its new, improved form, fits the bill perfectly. ●

Let there be Light

This month, Karen Donaghay travelled to the University of Durham - and found a PCW helping some budding theatrical stars to shine

What's the plot?

When questioned on the plot of Godspell, Alan Dennis replied, "Like all good musicals, there is very little plot. The story is loosely based on parables from the gospel according to St. Matthew". Hmm.

When the students of Durham took to the stage, the audience loved the show – a singing, dancing spectacular known as Godspell. But, how many of them realised, as they applauded at the end of the evening, that the success was partly due to the efforts of the PCW? It played a less obvious, but no less important, role than that of the leading actors. They may have been under the spotlight but without the PCW there would have been no spotlight at all.

Alan Dennis was the brains behind the debut. He watched the performance from a platform at the back of the hall. It gave him the best seat in the house – and a bird's eye view of the show – but Alan was more concerned with the events on his PCW screen.

"From here, I can control every light on the stage," he explained. A swift tap on the keyboard and, sure enough, the setting changed from a sombre green to an audacious red.

Another tap, and the revolving mirror-ball, so beloved of nightclubs, sent a flurry of lights across the backdrop.

Such expertise made it easy to forget that this was Alan's PCW's first foray into the world of showbiz. There was never a lack of native talent in the machine, but no one had written the software to let it perform in this way. So, Alan decided to produce his own.

"This is the heart of it all," he said of a small black box beneath the PCW. "See that bunch of leads?" pointing down the hallway, "they go into the lighting racks themselves." Or, as they say in the children's anatomy song: the PCW is connected to the black box, the black box is connected to the lighting racks and the lighting racks are connected to the lights.

Nuts and bolts

The role model for the whole system which Alan has created was a professional lighting controller called Sirius. However, the sliding controls of Sirius are reproduced by an emulation of the same on the PCW screen. Each control is adjusted not by hand but by mouse, which produces more or less the same thing effect. Up with the mouse means up with the brightness and there are twenty four channels, or lights, to choose from. But that is by no means the end of it. The lighting can be worked out for each scene of Godspell, and replayed in order. This was the impetus behind both Sirius and the PCW version and Alan was well aware of the advantages.

"I sometimes do stage lighting using an old manual controller," he told us. "You have a big bank of faders that you just slide up and down manually. All the cues are written down on paper, and it gets pretty frantic at times. You have to set up one scene and keep an eye on stage to see what's going on, so you don't miss the changeover."

So what was different when using the PCW? "The beauty is," explained Alan, "that you don't have to worry

about the next scene. All the light settings are saved at your leisure on to disc. When it comes to doing the show, you just press the right button at the right time, and away you go."

The right time is, of course, at the end of every scene. But, here curiosity began to take over. Just what was in the black box? And how did the whole jigsaw fit together?

"Do you want me to get technical?" Alan asked disarmingly. When a Computing and Electronics undergraduate uses the word 'technical', you know they mean business. So, to cut a very long story short, here is how it all works – straight from the horse's mouth.

"What you see on the screen is written in BASIC," explained Alan. "But the part of the program that sends information to the box is in machine code." The box is connected to the expansion port, at the back of the PCW and once the information has reached the black box, it is translated into ordinary electrical signals. Alan described the box as being , "full of standard electrical components bought from a catalogue." Finally, the electrical signals are sent down the cables to the lighting racks where they control the brightness of individual lights on stage.

The whole project took Alan and a fellow student, Jonathan Adler, about eight months to complete, and it all started from a fairly casual idea.

"We both have an interest in lighting," explained Alan, "and we just thought that it would be nice to turn the computer into the controller." Once the idea had germinated, neither could resist the challenge, and the project took off – not in search of the end result – but

simply "because it was there."

Nonetheless, it has paid for itself. The real Sirius controller, upon which Alan and Jonathan's system was based, costs £60 to hire for just one week. Their version cost only £120 to build and, after two weeks of use, Alan was able to assure us that it is just as good as the prototype.

Cloud ten

The system was duly christened Q-Nim. "We figured that Sirius sounded like quite like Cirrus, which is the name of a cloud, so Q-Nim is the name of another type of cloud. Rather corny, but we like it," Alan told us.

Q-Nim's first call of duty was the opening song in Godspell, a bright, bouncy number that called for a suitably jolly atmosphere. Alan designed the lighting to match.

"As you can see, there is lots of colour in it. We've got a pink backdrop there, to give an air of brightness. There are also two very bright lights at the back, one in orange, one in pink. The rest of it is lots of general white lighting to make sure that all of the actors can be seen clearly."

And how is Alan's PCW put to use when it is not involved with Q-Nim? "I use it to write my academic work," said Alan, "although basically I bought it as a computer not as a word processor. I mainly use it for projects like this."

His other little projects include a speech synthesiser and an LED display that would not look out of place in any shop window. The PCW, it seems, can do practically anything, once you know how. In fact, Alan's only criticism of the machine was the lack of literature to

A scene from Godspell, which features students from the University of Durham as the stars. Although it's not in evidence in this photograph, the PCW is responsible for controlling the lighting - with the help of a clever program written by Alan Dennis

support such endeavours. "Once you get down to the nuts and bolts level," he told us, "the PCW is a very good machine. But you do have to work things out for yourself."

This is obviously not too great a hurdle for Alan, especially in view of the detailed work which must have gone in to Q-Nim. In fact, we're willing to bet that he was probably playing around with wires and circuit boards as soon as he could crawl.

So just how early does a technical genius have to start these days? "Not that early," replied the budding whizz-kid. "I was about thirteen, I guess." Hmm, sounds fairly precocious to us, Alan, but keep up the good work! ●

Shedding a little light on the subject...

So what does a scene look like when you are sitting at the controls? We got Alan to tap a few keys, and show us a scene called Willows, seen in the screenshot on the left. "This is when we get to use the infamous mirror ball," said Alan. We begged him to tell us more. "There's quite a melancholy song to go with this scene, and there are a couple of dancers at the back, waving their arms about in an arty sort of way. To match the atmosphere, we chose a green backdrop, with a bit of blue mixed in, to get the melancholy effect. In this scene we also have two floodlights at the top to give us lots of blue light on stage."

In the Q-Nim program you can see that these four lights are set at differing levels. The revolving mirror ball (channel v) is set to full brightness. The green light is the t channel, and the hint of blue is channel u. Blue floodlights are set using channel p.

"If you wanted to adjust any of these lights, the level is affected either by clicking on the arrows with the mouse, or by typing in a letter," explained Alan.

Once the multifarious colours are set up, each scene is given a name and number: this one known forever more as Willows 110. In addition, so that the stage does not plunge into pitch blackness between scenes, there is also a transition time, where one scene fades gently in to the next. In this case it is set to 3 seconds.

Clicking on the Go button will change the lighting slowly to the next on the list – Willows2.

This sounds just about all a lighting engineer could ever wish for, but there are a few extras that make the frenzied life of working behind the scenes just that bit more pleasant. For instance the option 'Blind' allows the user to retrieve screens from the script and edit them, without effecting what is happening on stage.

And to help keep all those artistic temperaments cool, there is the 'Give Me' option. "In rehearsals, when people are working on sets," said Alan, "and I'm trying to sort out the lights, we are frequently plunged into darkness. The cry

goes up 'Give me some lights!' Pressing 'Give Me' puts on full lighting instantly."

Another option, Topset, allows Alan to put a limit on each channel. Normally it is completely full but if, for instance, somebody knocks a light and it is pointing in the wrong direction, it can be turned off for the remainder of the show.

Alan seems to have thought of everything, and he has succeeded in making the program quick and easy to use as well. If only, we thought, all program developers could be as conscientious as this one! We can't help feeling that Alan Dennis will be a name to look out for in the future, in the world of software for the PCW...

Q-Nim, from start to finish, is a very well thought out, professional-looking program. This opening screen is proof enough

In Godspell, 'Willows' on the stage is a swirling, melancholic kind of scene, but to the PCW it looks – rather less romantically – like this

BOOK LOOK

USING THE AMSTRAD PCW9512
by John Campbell

£9.95 ● Heinemann New Tech ● Halley Court, Jordan Hill, Oxford ● ISBN 0 434 90201 2

VERDICT: A very clear and informative book, especially for the beginner - and of use to 8000 series owners too

This book is the little sister of *Exploiting the Amstrad PCW9512*, which was the subject of last month's Book Look. Its author is one of the co-authors of *Exploiting*, it is part of the same 'Step-by-step' series, and it covers some of the same ground. *Exploiting*, though, was aimed at those who had been using their computer for some time; *Using the PCW9512* is aimed entirely at the beginner.
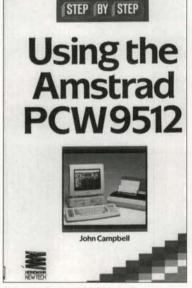
As such, it has to be very lucid, and very basic. It is both of these. The text is organised very clearly, with highlighting techniques such as bold printing and capital letters used to great effect. The language is consistent, which means that a term once defined, or a procedure described, comfortingly retains the same name throughout.

Not everything about the book is absolutely perfect – but then that is quite a tall order for any publication. In this book, for example, there are plenty of screenshots, but they seem to have been taken from an PCW8256 computer, rather than a PCW9512. Can you tell and does it matter? Well, yes you can, and yes it does. An 8256 has an A: drive capacity of 173k, whilst the 9512 has 706k; and the 8256 has an M: drive capacity of 62k, whilst the 9512 has something more akin to 300k free in LocoScript. So you are actually getting far more disc space on computer than the book implies. A bonus to those in the know, but a possible source of confusion and perhaps concern, to those new to the game.

Screen shocked
More serious is the fact that at a couple of points this use of 8256 screenshots actually disagrees with the text – on whether your printer control status shows 'PCW9512' (in the text) or 'Matrix' (which is what appears on the screenshot). In the same vein, there is a screenshot towards the end of the book that purports to show the contents of a 9512 CP/M systems disc. It doesn't – it shows an 8000 series disc, with many fewer files than the 9512 disc.

Other small flaws are more a matter of what the book does not tell you. For instance, looking ahead to the short CP/M section which comes at the end of the book, there is no mention at all of the 8000COPY utility which is essential for reading certain discs on the 9512. Apart from these, however, there are no

Using the Amstrad PCW9512: "Easy to follow, and full of sound advice"

quibbles with the book, as it takes the new user through the early stages of PCW ownership. Starting with 'Plug the machine in to the mains,' it moves on through booting up and gets CP/M running at the earliest opportunity, using it to copy the master discs.

And then the plot takes an unexpected twist. We are not taken to the editing screen to fiddle around with existing text from disc; we are not shown how to create a new file. No. Instead, the book shows us how to turn the PCW into an electronic typewriter, using direct printing mode.

A little reflection reveals some solid reasoning behind this. Many people get their PCW as an upgrade to their typewriter. The best way to assure them that they have not taken a quantum leap into the unknown is to show them that their new machine, rumoured to be devilishly incomprehensible, can actually do exactly what their old one did!

What is more, the process of loading direct printing means the beginning of a life-long interaction with the computer; using it will acquaint the owner with the keyboard and its layout, and (very importantly) will bring the printer into use. Quitting it will give you confidence about moving around the various sections of the program, plus the reassuring knowledge that you can even get back to where you started from – in this case, the disc manager screen.

Even from this small experiment it will become clear that the PCW can do far more than a typewriter, and with confidence on the up, the new user will feel equipped to go ahead and see what the rest of the computer can do.

But only very slowly. A whole section of five pages is devoted to 'Interpreting the Page display'; four pages explore the intricacies of moving the cursor around the text, and another large section deals with the disc drives – which is fair enough, since these constitute one of the main differences between a typewriter and the PCW.

The same logic that put direct printing before all else directs the rest of the book. Having equipped the user with a basic understanding of the machine, it goes on to explain creating, editing and printing a document; then comes "Tailoring page layouts" and "Enhancing the printed page".

It is at this stage that it becomes apparent that the book is about the 9512, not the 8000 series. The information on changing the print wheel and the print cartridge are not going to help dot-matrix owners, and because of the limitations of the daisywheel printer the operations to get italics, different sized characters, alternative character sets and so on are not covered.

On the other hand, the advice on using different printers from LocoScript is extremely valuable. Infact, it is one of the best short explanations of the problem around.

Optional extras
A second area in which the average 8000 series owner is going to feel left out concerns the additions that are bundled with the basic LocoScript program on the 9512 – LocoMail and LocoSpell (although again the screenshots of the Disc Manager disagree with the text – they omit the LocoMail commands). Again, though, the coverage given to these is clear, concise and quite excellent. In particular the "When and why of mailshots" section should prove useful, and may well persuade 8000 series owners that an upgrade is in order!

The final section of the book picks up the discovery of CP/M that was left hanging in the first section. It is referred to as "housekeeping" and covers the major utilities, such as DIR, REN and PIP – all you need to know, but not what to do with that knowledge!

An excellent book, then, for the beginner on the PCW9512 – easy to follow and full of sound advice. The 8000 series owner prepared to identify and pass over a few irrelevant sections will also not be disappointed. And where do you go eight months later when you begin to feel the urge to widen your computing horizons...where else but "Exploiting the Amstrad PCW9512"? ●

Making Waves

Breaking into the competitive world of radio script writing can seem like a daunting task. Nick Vandome equips you with some useful advice

I n these days of multi-channel, multi-screen television it would be easy to think that the trusty institution of radio is getting shunted into the background. But thankfully the reverse seems to be true; as the television audience fragments, more and more people seem to be turning to radio for entertainment. This can only be good news for writers, for

Hamish Wilson: "Radio is about sounds, music and effects. People should consider all these things when they write a radio play"

two reasons: radio writing is easier to break into than television, and the BBC have a vast radio drama output, producing over 400 plays and numerous short stories every year.

But what is involved in producing scripts for radio? We talked Hamish Wilson, a radio producer at Radio Scotland in Edinburgh. First impressions were very reassuring. Both Hamish and his assistant use Amstrad 9512s for their work and there were several copies of 8000 Plus tucked into his bookcase. Indeed, there seemed to be Amstrads scattered throughout the building, and the scripts used are written and printed on 9512s and the final copy is used by both producers and actors.

Understand the medium

It is clear that as much effort should go into the act of planning a radio drama as writing it. As Hamish explained, you should not just think about writing a play but specifically a radio play. "Radio is a particular form of dramatic medium which is very intimate in its nature; uniquely, in radio you can actually get inside somebody's head and listen to their thoughts while the rest of

the world is going on around them.

"Radio drama is not just about the spoken word; it is also about sounds, music and effects. People should consider all these things when they are writing a radio play. Writers should not feel constrained by the notion of not being able to see the characters - people will see them in their imaginations. Do not feel that you have to exclude visual notions from the script."

The BBC offers a wide range of outlets for radio drama; from the institution of the Morning Story on Radio 4, to plays ranging in length from thirty minutes to an hour and a half. Before you turn your hand to any of these Hamish Wilson urges that you sit down and listen to as much radio drama, of all varieties, as you can. This way you should be able to get to know and understand how the medium works and, hopefully, you will find a type of drama that best suits your style.

Talking to Auntie

Having decided what type of play you want to write you can then approach the BBC. In the first instance it is best to contact your regional centre, and Hamish Wilson says that it is not always necessary to send in a complete script. "It is often best when writing to a producer for the first time to submit a three or four page outline rather than sit down and blast in your full 320 minute version of War and Peace. A lot of people worry about outlines because they are very difficult to write since it is pre-empting an idea that is not yet fully formed. Once the play starts to be written it may be that it takes on its own organic life and moves away from what was originally set down in the outline. As long as this is better than the outline then you are winning.

"When you send in your outline you will get a letter saying it has arrived. Then after a relatively short time you will get a letter saying, 'We don't think it is quite right, for these reasons... but do keep in touch and let's see what else you have.' Or you may get a letter saying it is an interesting idea, come in and talk to us. If the idea is to proceed from the outline you will end up talking to the person who will be producing the play. In radio, unlike TV, the script editor, the producer and the director are one and the same person. He/she will work with the author and bring the text on until it is ready for production. He

will then cast it, take it into the studio, produce it, edit it and write the trailers. Authors who are new to writing drama find it very reassuring because you get to know the person with whom you are working quite well."

If your outline is accepted then the BBC will pay you half of the commission fee and tell you to lock yourself in your garret for a few weeks and write the play. When it is finished, and the producer is happy with it, you will receive the second half of your commission. You will then be invited along to the read-through and also as much of the recording as you like. This is where you will see your printed script being turned into a piece of living, breathing drama before your very ears.

The right wavelength

Radio is one medium where you can write a play about virtually any subject and set it in any time and any place - as long as you can create that time and place in the listener's imagination. Most importantly write about subjects with which you feel comfortable. These not necessarily be elaborate or exotic: good stories can appear out of any subject.

When it comes to dealing with controversial subjects such as HIV or drug abuse Hamish Wilson says that no play would be rejected just for writing about these topics. However, he did issue a word of warning. "There is a big difference between writing a play which as part of its existence addresses a controversial subject and sitting down to write about, say, drug abuse in the form of a play. The important thing is that the play and the dramatic tension between people has to come first rather than the play becoming a billboard for a cause. It would be equally wrong to deal with it in a hole-in-the-ground, back alley kind of way, but it is a very difficult area, and one likely to provide more pitfalls than smooth paths."

Length is also an important consideration when you are planning your play and Hamish offered some advice, particularly regarding shorter plays. "If you are writing a short play of thirty minutes then it is best not to have too many characters. Each new character has to be very clearly and separately identifiable, vocally, and new voices take a bit of getting used to. If you have ten characters in a half hour play it becomes a problem. But if you have two characters the audience very

Fair pay

Rates of pay for radio drama at the BBC vary depending on whether you are an established writer or a newcomer. For a play a newcomer could expect £18.85 per minute while the rate for an established writer would rise to £28.70. For short stories the rates start from £93.00 for 15 minutes.

quickly learns who they are and can concentrate on the story."

Obviously, the longer a play is then the more chance you will have to develop themes and characters but you should be aware of the dangers of getting too involved and complex. This does not mean that you have to stick to the thirty minute play: if you feel your play should be sixty or ninety minutes long then write it as such. Due to the nature of the medium, the only surefire way of working out how long your play will be is to sit down with a stopwatch and read it aloud - making suitable allowances for dramatic pauses and sound effects.

Getting in tune

Since Hamish Wilson has spent over fifteen years in radio drama he is well aware of the pitfalls that can befall a writer new to radio. "My experience is that I often get plays where the author seems to have a very good ear for dialogue but not a good idea of structure. Despite the need for good dialogue you have to sort out how it's going to begin, what is going to happen in the middle and when it's going to finish - and why. On other occasions you get complicated plots, very carefully structured, with dialogue that feels very wooden. Sometimes I wish I could blend the two styles together.

"The type of thing to avoid is what I call 1920's radio drama writing when writers thought they had to provide all the visual information for the audience through the dialogue. Even the smallest stage direction seemed to be incorporated into the characters' lines. These days the writing has become a lot

more sophisticated, partly because we are dealing with a much more sophisticated audience ."

It seems that the best scripts have minimal stage directions. If the script is well written then the producer will be able to do the rest. Similarly, scripts do not have to be written in dialect; with good casting, the script will be given accurate regional accents if needed.

Striking a prose

Apart from original plays, another source of radio drama is the dramatisation of existing pieces of prose. If you want to try this the first thing to check is whether the copyright is available. You can either do this by checking with the BBC (they have a department in London that deals exclusively with the tortuous intricacies of copyright) or write to the publishers of the work in which you are interested.

Even if you overcome this formidable hurdle it is still a difficult area for a new writer to break into, as Hamish Wilson explains. "The processes of dramatisation are delicate and most producers in radio will turn to writers with whose work they are very familiar. If you want to try it I would suggest a short story from someone like Charles Dickens and just give it a go. The big problem is that there is an awful lot of narrative in a piece of prose and it has to be got rid of by turning it into drama, while not losing the narrative thread. Again this is where effects can come into their own."

One excellent outlet for fiction writers who are interested in having their work on the radio is the Morning Story. This is a fifteen minute short

story that is broadcast four mornings a week on Radio 4 at 10.30am.

As with shorter plays the story should be strong, relatively simple in plot and not involving too many characters. The length should be approximately 2100 words and again it is best in the first instance to send it to your regional BBC centre.

The down side

Just like every other form of writing, there is always the possibility of rejection when writing radio drama. In the BBC, reasons will be given for rejecting a piece of work and if the producer thinks the writer shows promise then they will be encouraged to send in any more material that they have. This will be a genuine request and not an attempt to lessen the blow.

However, if your work is rejected by one regional centre then do not try and send it to another one - the BBC has a database of all the scripts that they receive and whether they have been accepted or rejected. So if your script has been rejected in Birmingham do not try sending it to Cardiff as they'll know that it has already done the rounds.

In some ways, radio may seem less glamorous than television, but the excitement of the medium lies in being able to stimulate peoples' imaginations - as one young girl noted when she wrote to the BBC to say that she enjoyed radio rather than TV because the scenery was more attractive.

Considering the number of opportunities it is also an attractive proposition for writers: soon you may be hearing your work over the airwaves as well as seeing it on the printed page.

Regional BBC Centres

Broadcasting House, Whiteladies Road, Bristol BS8 2LR.
Broadcasting House, Llantrisant Road, Llandaff, Cardiff CF5 2YQ.
BBC, Pebble Mill, Birmingham B57 QQ
New Broadcasting House, Oxford Road, Manchester M60 1SJ
BBC Radio Sheffield, Westbourne Road, Sheffield S10 2QU.
Broadcasting House, Queen Street, Edinburgh EH2 1JF.
Broadcasting House, Ormeau Avenue, Belfast BT2 8HQ.

For a full list of all radio stations and departments check your library for a booklet called Contacts, published by Spotlight, 7 Leicester Place, London WC2H 7BP, and edited by Anne Merrall.

How to prepare a script for a radio play

While they do not insist rigidly on a specific format for scripts, the BBC do work to their own layout and they would prefer to have scripts sent to them in this form. Many regional BBC stations use PCWs to produce their work. It is well worth checking with your local centre before you submit any work; it could mean that submissions could be sent in on disc. However, it is always wise to submit a hard copy version even if PCWs are being used; it is more tangible a form to work with, and if you back it up with a disc bound version, changes can be implemented easily.

So, just how should a script look on the printed page? The layout required for plays is rather awkward, but LocoScript makes it easy to achieve. This is how.

First set a layout in your document with margins at 10 and 80 and tabs at 15 and 30. LocoScript 2 At the start of the new document, press [f2] and select 'Change layout'. Press [f3] and select 'clear all tabs' then [ENTER]. Move the cursor to 10 and press [f1] [ENTER] to set the left margin. Now move to 15 and press [+] to set a tab. Move to 30 and press [+] again to set another tab. Move to 80 and press [f1] [down cursor] [ENTER] to set the right margin. [EXIT] back to the document. LocoScript 1 At the

How your play script should look on screen. Note the layout, and that special 'alt tab' after the colons - shown as an arrow with a flat end - that makes the following speech assume the correct layout

start of the new document, press [f7] [ENTER] [f7] [f1] [down cursor]. If there are any tabs set (shown by arrows or blobs in the ruler line) remove them by moving over them and press [-]. Move the cursor to 10 and press [f1] to set the left margin. Move to 15 and press [f3] to set a tab. Move to 30 and press [f3] again to set a tab. Move to 80 and press [f2] to set the right margin. [EXIT] back to the main document.

In the document, make phrases for each character as follows. For "King" for example, type the following (with no spaces):
$. [TAB] KING: [ALT] [TAB]
Now put the cursor at the beginning of this line, press [COPY], move to the end with [EOL], and press [CUT] then k.

From now on until you switch off, pressing [PASTE] k not only inserts the name of the this character, but also makes sure his lines assume the correct layout, i.e. each new line starting automatically at 30.

Repeat for other characters, storing "Diana" under d, "Donoghue" under e and so on. For incidental characters enter their names as follows:
$. [TAB] MAN IN PUB: [ALT] [TAB]
then type the speech.

For directions, press [TAB] then [ALT] [TAB] then [+] ul [SHIFT LOCK] and type the text. End with [-] ul [SHIFT LOCK].
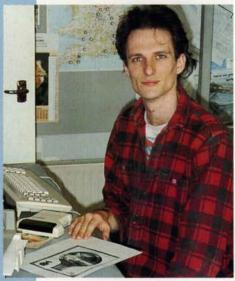
You may be required to number the speeches. If so, just before printing out your final draft, go through changing the $s to numbers, starting at 1 on each page. Use [FIND]$ (and subsequently just [FIND] [ENTER]) to jump automatically to the next $. Otherwise, press [EXCH] and replace all $. by nothing.

Right to Reply

If you are having difficulty getting to grips with a new piece of software, your first reaction might be to contact its authors. Creative Technology's Nik Holmes (of Micro Design fame) looks at some alternatives

When you buy a new program for your PCW, it is fairly likely that you will eventually come to a grinding halt. This is not necessarily a reflection on your own capabilities: it probably suggests that the software and its accompanying manual are not as friendly and easy to understand as you would like. But what can you do? Should you seek an explanation from your dealer? Contact the authors of the program? Or should you feel obliged to spend a vast amount of money on some kind of training? This is in fact part of a

Nik Holmes: "Free and unlimited technical support is simply not viable if there are too many people using it; if software houses spend all their time on technical support, no new programs will ever be written."

larger question, to wit: 'when I buy a computer program, what am I actually getting for my money?'

According to law, the answer is that you are not even buying the program: you are only buying a licence to use it. The law certainly says nothing about technical support, or any other form of after-sales service: you are entitled to a working program disc, but if you have any problems using it, you're stuck.

Good high-street dealers will help as much as they can, and they generally have some basic knowledge about the programs they sell. Unfortunately, most software buyers insist on buying their programs from the cheapest sources, which very often means 'box-shifting' mail-order companies who are not interested in giving technical support. In practice, the software authors end up doing most of the support. Fair enough, you may say, the software company are responsible for the product, they make the most money. But this is not as

straightforward a situation as you might imagine, because the hard facts of business life make after-sales support a very costly direction in which to expend the resources of a software company. It is a shrewd software author (or company) who really does take the lion's share of the revenue out of his/her program: remember that as well as being written, a software package must also be documented, manufactured, distributed, advertised, and retailed, and everyone wants a piece of the action. Free and unlimited technical support is simply not viable if there are too many people using it: if software houses spend all their time on technical support, no new programs will ever be written.

Supportive measures

So how does a software company organise good technical support without going bankrupt? There are three basic strategies: first, make the software and the documentation so comprehensive and so simple that anyone can use it without help; second, charge a fee for software registration, and support only registered users; and third, use the '0898' telephone lines to charge people automatically according to the time they actually spend using the support service.

The first of these alternatives is obvious, and it is in everybody's interest to pursue it as far as possible. However, documentation can never satisfy everyone's needs, and in the PCW world, the machine's own manuals are often incomplete and difficult to use. A significant proportion of the calls we receive are nothing to do with our software, but refer to the PCW hardware, operating system, and sometimes even other companies' programs. Providing a free consultancy service for other people's products is a short and painful route to the work-house, but it's very difficult for us to support our own products properly without getting involved with more general topics. The other important point about documentation is that while we have long since incorporated the answers to all the most frequent user queries into our documentation, this does not necessarily mean that people read it. Even the offer of a free newsletter containing hints and advice is only taken up by about 10% of users: people find it easier just to ring us up.

The second alternative sounds reasonable, but actually represents a

logistic nightmare. For a small software company like ours which receives 30-50 calls every day from nearly ten thousand users, the paperwork and administration of a registration system, and the need to check up on every single caller before giving out any precious information, only increase the workload. The cost would also be a problem: in the business computing world, corporate users pay substantially for 'maintenance contracts', but this only works if the number of individual clients is manageably small, and the fees are extortionate. Support is undertaken as a business venture by support specialists, not by the software authors.

The last option, the dreaded 0898 number, is at least fair: it charges users according to how much time they spend on the phone, and the cost is a powerful deterrent which may convince people to look just a little harder in the manual to find the information they require. The system is, however, a poor discriminator, with no humanitarian understanding of the fact that those most in need of help are sometimes those least able to pay for it. It is also a means by which Telecom can make lots of extra profit out of all of us.

Friendly user

So given the limitations of all these alternatives, I would like to take this opportunity to promote a new approach. One of our users, Phil Cole, is trying to set up a MicroDesign2 user group which, among other things, could function as a network through which those experts in MD2 who are happy to receive phone calls and dispense their wisdom on a strictly non-professional basis could do so. Networks like this could gradually distribute expertise around a large number of enthusiasts. They could provide the opportunity to get to know each other, have meetings and improve understanding of both the program and the PCW in general. The software houses would then have the time to produce new programs for everyone's use and enjoyment.

Call me a dreamer. Or an idiot. But all I want is to spread friendship and happiness, and to give us time to work on new projects which might continue to pay the rent after MicroDesign2 has gone to that great PD library in the sky. Send an SAE to Phil Cole, at 15, Elsham Close, Bramley, Rotherham S66 0XZ – and help build a better world. ●

Headline News

Making the headlines can be much easier than you think – when call Micro Design to your assistance. Alec Rae finds out how

In our series of articles we have looked at all aspects of graphics production except for the one everyone would probably expect – the newsletter.

This is not because Micro Design 2 is not able to handle newsletters. Far from it. A file, several feet thick, in Creative Technology's gallery of user's work, testifies to the fact that people can and do regularly produce a wide variety of newsletters using the program.

Micro Design 2 obviously can produce full A4 page newsletters and with a decent printer the standard of output can be quite impressive. But, of course, there are techniques involved in making sure the finished product looks really professional.

One major element of any newspaper or magazine page is the headline. The large, bold, text immediately catches the attention and you need only look at any of the daily tabloid newspapers to see whether they think that banner headlines are important or not.

Tied to the Masthead

This is particularly important when you are producing your masthead. The masthead is the title at the top of the first page which tells whether you are reading 8000 Plus or the Stone Age Basket Weaver's Chronicle.

Your masthead has to be big and bold. It has to be more than just a slab of text. Most newspapers and magazines go to a lot of trouble to produce some striking visual effect to make their masthead stand out. And it has to look distinctly different from the headline which will be placed directly below it.

This is not too much of a problem with a program like Micro Design 2. It is packed with commands that can give you all kinds of graphic effects. Once your headline is on the screen, it is just treated as another piece of graphics to the computer.

You can box it, distort it, add bits, rub bits out and put patterns round it. In fact hours of innocent fun can be had messing about with your masthead.

But this still leaves the problem of making the text big enough to make a proper impression at the top of the page.

Big problems

Admittedly the program does come with a choice of 15 different type faces and some of the most popular fonts, such as Helvetica and Times, come in four of five different sizes. As well as this, Creative Technology have brought out three extra discs, packed with other fonts and type sizes.

But even with the full choice of fonts there are no loadable fonts above 33 point, regarded by newspapers and magazines as really only big enough for strap lines (the subsidiary headings you run under the big text).

There is, of course, the ability in MicroDesign 2 to increase the size of any font. While using the WRITE command you can increase or decrease the height and width of the letters.

But this again can cause problems. Each of the letters in a font is made up of a series of dots. Even the biggest fonts are made up on grids only 30 dots by 60. If you look at a letter such as R in Zoom mode you can immediately see potential problems.

The straight line on the left is no problem. But the curved upper part of the letter shows the distinctive 'stepping' caused by the attempt to create a curved line with a series of square dots. And the diagonally sloping leg ends up looking more like a saw than a straight edge.

The letter prints out without any problem in a small size. But if you double the size of this letter you simply accentuate these slight flaws until they are really obvious.

Also, unless you get the relationship between the height and width just right, you can often get very strange distortions of the letters, that could result in your readers immediately rushing off to the optician.

Big Fonts

Some big fonts are provided on the extra discs but not these are not in the same format as the normal loadable fonts. They come in AREA files, filling more than half a page with all the letters (in capitals and lower case), numbers and punctuation marks.

Using them is time-consuming. But it is also well worthwhile if you want to produce a really professional page.

You cannot load the font as you would the smaller sizes as it would be just too big to fit in the available space in working memory.

Instead you have to create a series of .CUT files, containing each letter you require. The convention is to save a capital A under the title AA.CUT and the lower case a under A.CUT. Then by loading each letter in turn, using LoadCUT and lining it up carefully with the other letters, you can then produce large text.

If you are really keen you could do this with every letter in the alphabet. By saving different fonts in different user groups (you press [ALT] and [U] to change user groups in SaveCUT or LoadCUT), you could keep several big fonts on one disc.

In case you weren't already aware of the fact, a PCW disc is divided up into 15 different user groups. The first eight groups are the same as the eight columns shown in LocoScript. Normally when you load a disc it is in user group 0. If you call up a directory, it will only show you the files stored in that group.

In MicroDesign 2, you can move from one user group to another by pressing [ALT] and [U]. This way, for instance, you can keep files with the same name on the same disc.

If you have saved a text file in LocoScript in any column other than one at the far left (Group 0), you will have to look through the various user groups to find it.

The lazy way to do it, by the way, is to load the AREA file in the bottom of the page and then use BLOCK to copy each letter in turn into the right place, using STORE 1-4. Fit the adjustable box tightly round the chosen letter and choose the STORE 1-4 option. Then press a number between one and four.

Move to the part of the screen where you want your headline and press the number that you stored the letter under. A box will appear which you can place in the normal way. Press [ENTER] and the letter will appear.

The Zoom Option

But even if you don't want to invest in these big fonts, you can still hit the big headlines with a lot of patience and the trusty Zoom facility.

You simply blow up your letters by increasing the size in the Font Scaling menu or even rescaling the text using the BLOCK command and then smooth off the edges using ZOOM.

ZOOM blows up small parts of the screen to a size where you can work in tiny detail, switching individual pixels on and off.

If you do use this option, however, it would be wise to choose a short title for your newsletter or journal. To smooth the edges off The Stone AgeBasket Weaver's Chronicle would take a very long file.

➤

1 Considering the masthead

2 Selecting a font

3 Producing samples of fonts

So here you are faced with creating a new masthead for your newsletter Hard Times. We would have called it Hard News but as every journalist knows it is a lot easier to find Hard Times than Hard News.

Obviously you want the font you use to be big enough to command respect at the top of the page. Frankly 33 point is not good enough.

At the same time readability is not of vital importance. There are only going to be a couple of words in the title and, if you create a memorable enough masthead, these don't even need to be readable. This is one time when you can use the more fanciful type faces without worrying too much.

Having said that, you may not want to choose too ornate a type face as this will cause more problems when you reach the stage of having to clean up the edges in the bigger sizes.

The first thing to do is to pick a font that you like. Go through the likely fonts you have available and print out the title of your newsletter in each, to see what it looks like.

In Layout press [D], move the box to the top left hand corner of the main screen and press [RETURN]. You will find yourself in the Design Section working in the top left hand corner, a very good place to start.
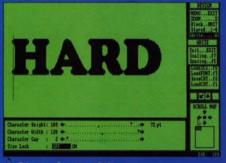
Press [f3] and the program will offer to load all the font files (.MDF files) on the drive you are logged on to. If your font disc is in drive A: press [ALT] and [V] until the bottom box reads LOAD FONT A:*.MDF. Then press [RETURN] and a list of the available fonts will appear. This time we chose BOLDEN33.MDF from the Extra Fonts Disc 2,([RELAY] and the cursor keys until the highlight box is on the correct name and press [RETURN]).

Hit [W] for WRITE and you can see what it looks like. But just as interesting for this exercise is seeing what it looks like several times bigger than it should be.

One important point to remember is that a big font will always look better if you keep it in proportion. You will see a subsidiary menu with the option Scaling...[f7].

This brings up a couple of scales, in the bottom window, governing the height and the width of the letters. By clicking on the right hand arrow of the top scale you can see the height of the font increasing. The idea is to keep everything in proportion.

The easiest way to do this is to double or treble the figures shown. In this case the height was 54 and the width 60. Push these up to 108 for the height and 120 for the width. This way, the letters will not end up looking distorted.

4 Choosing a title
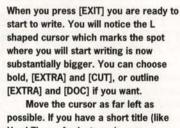
5 Tidying the edges

6 The pixel question

When you press [EXIT] you are ready to start to write. You will notice the L shaped cursor which marks the spot where you will start writing is now substantially bigger. You can choose bold, [EXTRA] and [CUT], or outline [EXTRA] and [DOC] if you want.

Move the cursor as far left as possible. If you have a short title (like Hard Times, for instance) you are fortunate. Type in the words HARD or TIMES and they fit quite easily on to the DESIGN screen.

This means you can save each word as a .CUT file – a file with far more detail than the AREA file. But it does have the limitation that you can only save the area that fits into the Design window.

If you have a title that is too big to fit on the screen at one go you may have to save it in several .CUT files and carefully line them up. Either that, or you could think of a shorter one!

It is a good idea to start tidying up the edges. If, later, you want to increase the size of the text again, you will have to repeat the process. But that is much easier than trying to, say, tidy up a letter that has been increased to four times its normal size.

Already you will see the effects of stepping, especially on the diagonal lines of the capital H. Press [Z] for ZOOM. A box will appear on screen which you can move to the part of the word that needs the most attention.

Press [RETURN] and the chosen area will be blown up to show every pixel, accentuating even further the stepping effect. The idea is to smooth out these 'steps' either by trimming off pixels or by filling in the gaps.
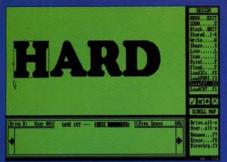
This is easiest where the slope or the curve is fairly regular, although in places it needs a reasonable amount of plain good judgement.

You now have to decide whether you think you should switch pixels on or off. If you chose the black box in the EXTRA Menu [EXTRA] and [RELAY] the downward cursor, the pixels are turned on. The white box [EXTRA] and the downward cursor key, means that the pixels are turned off.

This time we largely switched them on although, again it is largely a matter of judgement. You move the cursor to the pixel you want to change and click with the left hand mouse key or the space bar. If you make a mistake you can go back later and switch the pixel off later.

Keep an eye on the top box on the right hand part of the screen. This shows the area of the screen you are working on at normal size.

This will give you the best idea of how you are doing. When you are completely happy with it press [EXIT] and the screen will be changed.

7 Using SaveCUT files

8 Using the font

9 Making improvements

Anyone enthusiastic enough to carry out this tortuous process for every letter of the alphabet, can save having to buy extra font discs with the big fonts.

This would involve blowing up each letter of a font, smoothing off the edges and saving it using SaveCUT. To do this, press [f2] and fit the adjustable box as closely as possible round the letter.

To do this you click the right hand button on the mouse ([EXCH] for keyboard users) to move the crosshair cursor to the top, right hand corner and the bottom left. Then you can drag each corner until the box is almost touching the edges of the letter.

It is important that you save each file with a consistent margin round each letter. Then press [RETURN] and enter the appropriate name – AA.CUT for a capital 'A', BB.CUT for 'B' and so on. Lower case letters would be saved as A.CUT for 'a'.

Once you have done this you can, of course, use this font any time you want. Use a line to help you get the letters straight – LINE command and choose the dotted line option from the Extra Menu ([EXTRA] and [WORD])

Pick the right angle icon in the second row ([EXTRA] and [DOC], for horizontal or vertical lines only. Draw a vertical line across the screen.

Press [f1] for LoadCUT, backspace delete to take out the asterisk and enter HH or whatever the suitable letter is. After you press [RETURN], line the box up with the dotted line and press [RETURN].

Load each letter in turn. If you get off line move the letter with Copy ([BLOCK] and [f3], once you have adjusted the box). When you have finished take out any of the dotted line with [P] for Paint and the white box, ([EXTRA] and the downward cursor key)

Now is the time to start messing about, trying to make the masthead look more interesting. With the word HARD in the centre of the screen press [P] for Paint and choose a big square brush ([RELAY] and the cursor keys).

Click on the pattern box in the bottom line of the Extra Menu ([EXTRA] and the downward cursor key) and the Icon screen will appear. Click on Set 1 ([EXTRA] and [f1]) and the selection of patterns will be loaded.

Pick the brick wall pattern ([RELAY] and the cursor keys) and transparent ink ([EXTRA] and [COPY]). Then paint over the whole area of the word HARD, and everywhere you paint will be filled with a fascinating brick pattern. Make sure that the pattern is solid over the whole area and extending about an inch all round. When you are sure that you have finished, press [EXIT].

10 Tidying up the pattern

11 Deciding layout

12 Saving the image

Now to tidy up the edges of the brick wall. If you have a steady hand and a nerve of steel, use Paint [P] with white ink ([EXTRA] and the downward cursor key) to paint out any of the rough edges. Don't worry if you rub out too much. We'll get to that later.

Then you can use ZOOM to get all the fiddly bits. This time you will mainly be working with white ink (switching the pixels off – [EXTRA] and the downward cursor key.)

To make things look really interesting you can wipe out the lines round some of the bricks to give the impression of bricks that have been knocked out of the wall. Once you start playing around like this, you'll discover hours of fun!

When you are finished you can save your newly embellished word using the SaveCUT command and then carry out the same tortuous, but nonetheless enjoyable, process for the next word – ours being TIMES.

You can use these files to create your masthead in minutes, using LoadCUT ([f1]). One advantage is that you could use the words side by side or banked on top of each other depending on the design of your page.

But if you were feeling really keen you could actually double the size of these .CUT files again.

This time you work in the Layout section. Hit [f1] once for LoadAREA and then again to change the type of file you are looking for. You will see a wide range of file types, including one for .CUT files in the middle column.

Move the highlight box on to that ([5]) and press [RETURN]. You should see all the .CUT files on your disc, including, hopefully HARD.CUT or whatever you chose to call it.

Choose the x2 option from the Extra Box ([EXTRA] and [UNIT]) place the box and press [RETURN].

Naturally you will have to start all over again in the Design Section using ZOOM to smooth off the edges. But you certainly will have a masthead that is really impressive. When you print this out it is best to use draft mode, as the quality mode seems to be confused by the downward strokes.

Having completed all this hard work you may want to make life as easy as possible by saving the finished masthead as an AREA file. Position the masthead exactly where you want it on the Layout Screen (using BLOCK and COPY) and then press [f2] for SaveAREA. Extend the adjustable box right to the top of the page and as far as you can on both sides.

Press [RETURN] and save it under a suitable file name (such as MAST.MDA). Then, when you start your newsletter next time you just use LoadAREA, move the box as far up as you can and it your masthead is perfectly positioned.

Perfect Figures

The spreadsheet was the first computer program which really made a difference to the home user. Tim Smith looks at how one could make a difference to you

If you ever find yourself in the unfortunate position of being stuck in a room full of computer historians, and they are a growing breed, sooner or later they will begin raving about the spreadsheet. The reason for this is that this piece of software had such a massive effect on the business, and then home user since. Why is this? Simple. The spreadsheet actually does everything it promises. It fulfils all of the ideals of a computer program which are as follows:

1) A program should make the user's life easier.
2) A program should be easy to use.
3) If a pen and paper can do the job better then you don't need the computer.

A decently written spreadsheet, like the three we are going to look at here, will achieve all of this. Basically, a spreadsheet is a calculator, planner and report-writer in one package. It takes all the donkey work in calculating figures away from you, the user. All that you have to do is define what you want worked out, and the spreadsheet sees to all the fiddly bits.

A spreadsheet is an electronic work place which appears on the screen of your PCW as a grid made up of rows and columns. Into the rows and columns you enter figures and the text which explains what these figures are. You can also enter calculations which is the engine or main point of the spreadsheet.

It is very much like having a huge ledger book which does all the working out for you. Although widely used in big business where impressive colours and graphics are utilised to give reports, the spreadsheet is also useful to the home user and small business person. The reason for its usefulness, aside from the three points mentioned above, is that the hard work is taken from you. Think how boring it is to balance a household budget every week when you know that the calculations, and most of the figures are always going to be the same. You are always going to have to enter things like the newspaper bill, the HP payments, the quarterly bills. Tedious. With spreadsheets you only need enter information like this once, at the beginning of the year.

Secondly, in the manual budget, you have to do the same adding up, subtraction, division and multiplication every week. For example, how much do you have left once you have paid the milk, or the interest on your savings has been paid? Well, with a spreadsheet you simply enter the calculation once, again at the start of the budgeting period, and it will automatically update itself whenever you tell it to.

It achieves this not by looking at the numbers, but rather by looking at the area on the sheet where you have placed the numbers. For example, if you always put income in the area of the sheet referenced by Row A and Column 2 (this is known as cell A2) and you always but the milk bill in cell B4, you can enter the following - A2-B4, in another cell to find out how much you have to spend after paying for the milk.

So, if one week you get a tax rebate, or you have cancelled the milk for two days, you simply enter the new figures and your spreadsheet carries out the same calculations.

This saves you time, gets around the possibility that you might have carried out a wrong calculation, and takes the labour out of a boring job. When this theory is applied to a business, or more complex calculations, the savings in time and labour become immense. ➤

SUPERCALC2
£49.95 ● AMSOFT/SORCIM (091 567 3395) ● All PCWs

One of the most comforting things about SuperCalc is the manual, which is excellently written. It also comes with a tutorial section which leads you through the basics of terminology and setting up a sheet with the minimum of fuss. Add to this the fact that the program will baldly refuse to load unless its Help file is present and you have a very user-friendly package indeed.

Unlike Cracker Turbo for example, which needs the user to build up the basic grid, the first screen you see in SuperCalc is ready for work and the entry of text and figures.

Entering information takes a little time to get used to at first as you have to remember to press the [/] key before telling the program which type of information or command you would like to enter.

Everything, except the look of the printed output which is a little dowdy, can be modified by the user. This means that that the widths of the cells can be changed, text can be justified and you can tell the program whether you wish it to show formula or the results of the formula. This last element is useful

Supercalc is ready to use as soon as it appears on the screen. Simply fill in your figures and formulae

when editing your sheet.
A very handy utility which comes as an added extra to SuperCalc is one called SDI.COM. This program allows you to convert your saved spreadsheets into ASCII format. These ASCII files can then be exported to LocoScript, for example, for general tidying up if you wish to provide a more visually impressive printout of your figures.

SuperCalc also doubles as a database. You achieve this with educated use of its Sort command, which, in itself, is very easy to use. For example, you might be a treasurer for a club and have to keep track of subs payments. You enter the names of members in order, but of course new members join throughout the year. Using 'Sort' means that you can enter a new name wherever you want on the sheet, and SuperCalc will put them into the correct order.

SuperCalc is without doubt one of the best PCW programs, let alone best spreadsheets. Unhappily, with the recent closure of Amsoft by Amstrad, it may well be very difficult to get hold of directly. Keep your eyes out in the small ads for copies - and of course, check the mail order advertisements in 8000 Plus, where it is still widely available.
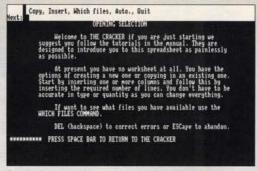
CRACKER
£49.95 ● Newstar Software (0245) 265017 ● All PCWs

Cracker will provide a bit of shock, and some initially dull but useful work, for the new user because it comes with no built-in working sheet. You have to build this one up from scratch. What this means is that you are not wasting valuable memory or disc space by making use of extraneous cells. If you wish to carry out limited calculations which only require ten cells, then that's the number you build in to your working sheet. If you are carrying out complex work, you have the option of customising the sheet exactly to

Cracker is a powerful system but rather difficult to use
This "help" screen actually refers you back to the manual

your requirements from the start. This has the added bonus of putting you firmly in the driving seat - because you built the sheet from the beginning, you actually feel that there is nothing hidden from you.

As regular 8000 Plus readers will know, the Cracker manual is about as easy to use as a video recorder is to program - you always end up with the snooker even if you wanted to record Mahler's 2nd or Gone with the Wind! The best advice here is to read the recent 8000 Plus tutorial series, which began in our August 1990 issue, and finished in February 1991.

However, once you have got to grips with basic usage, Cracker is the strongest PCW spreadsheet around. If offers a wide variety of functions such as statistical, scientific and financial calculations. And of course it comes with the much lauded graphic capability. After some work, this will enable you to produce flow charts, pie charts and other graphical illustrations of your spreadsheet findings. Whether this is of any use to the home user is debatable. It is certain however, to be an immense boon to the business user who has to make impressive reports or present complex information in a way which will retain the attention of a captive audience!

In terms of functions, and aside from the graphic ability, there is little to separate Cracker from SuperCalc, a statement which is no disrespect to either. Both programs have 'Sort' routines, are definable, and once you have got over the initial learning problems which come with seeing numbers as totally manipulable, there would appear to be little to separate them. However Cracker is constantly being updated by Newstar and is easier to track down than SuperCalc. Cracker is recommended to the PCW-owning business user rather than to someone who merely needs to keep track of personal or club budgets.

MINI OFFICE PROFESSIONAL
£29.95 ● Database Software (0625) 878888 ● All PCWs

The Mini Office spreadsheet is part of what is known as an integrated package, which comprises a suite of different programs. This means that any data from the spreadsheet module can be exported to, say, the word processor or even communications side. It has previously suffered, however, because of a poor history of user support.

As a basic spreadsheet, the Mini Office module serves its purpose but comes without all the bells and whistles you might expect from a dedicated spreadsheet.

For example there is no ability to create or handle tables with the program, nor can you carry out statistical calculations which are of immense use to business people needing to make long term projections. The other point to bear in mind is that it only offers a maximum working area of 100 rows by 100 columns. SuperCalc has 255 by 63, and Cracker

Spreadsheets don't come much clearer than this. Here Mini Office lets you change your spreadsheet via a simple menu

provides a possible 255 by 52. Now for the average home user, this is no problem at all, but for business or scientific usage it could pose a bit of a dilemma.

With all that aside, entering data into Mini Office's spreadsheet module could not really be any easier. If you enter a number then the program assumes that this is to be calculated at some point. Entering a word is treated as text. Now this might sound obvious, but with the other two programs we have mentioned, you have to inform the spreadsheet of what type of data you intend to enter.

To be honest, Mini Office offers no surprises or added bonuses at all. If you want a decent program which can be used alongside the many other functions in the bundle - even if this does mean having to quit from your work at the sheet in order to carry out a Sort routine (only available in the Database module of Mini Office) then it is the one for you. Recommended for home users and those people with limited but very clear cut needs for automatic calculations. Not, perhaps, ideal for the business user.

Jargon Busted!

As we all know, computers and computer programs give rise to jargon, waffle and what seems to be secret code. It is our job to clear up the mysteries and make the program that bit easier to read. Spreadsheeting brings with it a few terms and phrases which you will need to get to grips with. We will now explain the most important of these.

CELL: A spreadsheet appears on your screen as a grid made up of rows and columns. It is where these rows and columns meet that all the work is done. This area is called a cell.

Cells are defined to the user by a reference number which derives from the letter and the number of the intersection of a row (we shall call it row A) and a column (column 3); this cell would be called A3. Spreadsheets such as SuperCalc and Cracker can have up to 255 rows and 50 or 60 columns.

ENTRY: In each of the cells you can enter

the following: text, figures or formulae (we will get around to formulae presently). This, as you can see, is fairly basic stuff. If you wish to enter a title into a spreadsheet, you must tell it that you are entering text. Most spreadsheets ask you to type in a key combination to let it know which of the three possible entry types you intend to make, and will throw out an error message if you fail to do so.

FORMULA: Basically a sum or calculation. It is the heart of the program. It is the concept which normally frightens most people out of using spreadsheets, and is the basic term behind spreadsheeting. As we have seen, cells are referenced by a number such as A3.

You could spend your time entering numbers into each cell and carrying out calculations by yourself, but this defies the entire use of the program. Instead you enter a formula to add, multiply, subtract or divide any number of cells with each

other. In normal calculations, even those carried out with a calculator, there are a number of constants and random numbers to be entered.

For example, to find out how long ago an event took place, the constant figure is 1991 (we'll put this into cell A1). You can enter this into a cell and you never need to change it. However, you can use another cell for the random figure - the year in which the event took place, say 1966 (we will call this cell B1). Now in cell C4 we place the following formula, A1-B1. What will be shown in cell C4 from now on is not the formula (A1-B1) but the figure which this formula throws out. This means you can change the random number, the year in which an event took place, as many times as you want, and the spreadsheet will carry out the new calculation automatically. So, as you can see, the formula is the basic engine of the spreadsheet.

Life in the Fast Lane

The diminutive Canon BJ-10e Bubblejet printer is a punchy addition to the range of PCW compatible printers on the market. Alec Rae tries it for size

There are various stages involved in getting to know the BJ-10e – the new bubble-jet printer from Canon. First there is surprise. Can it really be as small as that? Then there is delight. Can something as small as that really produce such impressive print? And then there is frustration. Why couldn't Canon have sorted out the last few details to make it even more useful to the PCW user?

Admittedly Canon were probably not thinking of the PCW user when they launched this machine. It is significant that Amstrad are giving a BJ-10e free with their new laptop computer. There is no doubting that the machine is ideal for someone on the move. It is not over difficult to carry about at only 1.8 kilos (that's about four pounds) and you can even get an optional, internal NiCd battery pack to make it really portable.

But it also seems ideal for the PCW user who is looking for good quality print. A bubblejet printer is a strange hybrid, part of the inkjet genus, where the marks on the page are made by firing tiny ink drops at the paper through thin nozzles. The ink is heated in the nozzles, making it bubble (hence bubblejet), and also making it dry on the page instantaneously.

This means that it can produce a quality of printed text as good as, if not better than, the average daisy wheel printer. And yet it can still produce good quality graphics.

Small is beautiful

In effect, a bubble jet can produce printing of the quality of a laser printer without the bulk. As many PCW users work in cramped conditions, this might prove the ideal solution to many problems. It was one of the great advantages of the PCW8000 series when it was first made available that you could fit the computer and the printer into the tiniest of corners.

But it did mean that you had to accept the standard of print that the internal printer gave you. Virtually any other printer was substantially bigger and laser printers were of an almost unfeasible size for anyone's desktop. Now, at a stroke, all these problems have been solved. The BJ-10e is tiny. At 310 mm by 216mm and only 48mm thick, it is certainly no bigger than the average laptop computer and could fit on any desk. For our reader that still doesn't speak metric that is 12 inches by 8.5 inches and less than two inches thick. You have to admit – that is small.

But it's even better than that. You can flip a little stand on the bottom of the printer and balance it on its end so that it takes up no more than a tiny strip of desk space.

And yet the print that comes out the machine is of such a high standard, that even if you are not interested in saving space you could consider the BJ-10e a good investment anyway.

Cut and tried

Another big advantage, in terms of output, is the optional cut paper feeder. A cut paper feeder is an attachment that loads single sheets of paper into the printer one at a time, automatically.

The advantage of being able to load headed paper or to produce long documents on ordinary white bond instead of scrappy continuous paper makes a great difference to all your correspondence.

But this one is worth the money solely because of its ingenuity. It clips on to the base of the printer – at least what would be the base if it was sitting normally. But because of the BJ-10e's ability to sit on its end, the paper feeder sits upright as well.

You drop the paper in a suitably placed slot on the top, press a button and part of the feeder tilts to hold the paper securely in the right place to feed into the printer. It is a very neat and sensible solution - but do look at the diagram in the feeder manual when you fit it. It is such an unlikely idea you would never work out how it is attached without clear instructions.

The other way to look at it is, perhaps, that loading paper in the BJ10e without the cut paper feeder is a bit of a pain. Being small it does not have all the paper guides and fancy paraphernalia of some of its bigger cousins. As a result, getting a piece of paper round the roller without crushing it beyond recognition is a bit of a feat for the beginner.

Like all these things, it would be easy once you got the hang of it. But the cut paper feeder removes the need for this learning curve and presents paper in perfect condition in exactly the right spot each time.

Speed trials

Still on the advantages the BJ-10e, like virtually every other printer on the face of the earth, is substantially faster than the native PCW printer. The makers claim an operating speed of 83 characters per second, which compares favourably with any dot matrix printer for high quality print.

In our trials the most spectacular

Extra, extra!

You should be able to obtain the the BJ-10e's cut sheetfeeder and the replacement cartridges from the shop or dealership where you bought the printer itself. The sheet feeder costs £54.00, and the cartridges are £19.99 each. If you have difficulty in obtaining either of these items, contact Canon at the address and telephone number shown on the opposite page.

example was printing out graphics from the Micro Design 2 DTP package. The bubblejet took nine minutes 22 seconds to print out the example. The internal printer took 22 minutes 29 seconds (and that is a long time to stand with a stop watch in your hand).

In the 8000 Plus highly scientific 1000 word test, the bubblejet took two minutes 22 seconds to complete the printout (it's about two pages of normal text). This compared with a mammoth seven minutes 15 seconds for the internal printer in letter quality mode.

Admittedly draft mode text was marginally faster at one minute 47 seconds. But remember that the Canon was producing high quality text and the PCW printer was not.

But there is an even greater time saving factor than these figures show. These tests were carried out using the cut paper feeder. Once the paper is loaded in the feeder all you do is start the print process in the PCW and the paper is then loaded. To use the internal printer you have to load the paper before the computer will think about printing anything. So really, paper loading time should be added on to the internal printer results. And for the average 8000 Plus reviewer, this could add on anything up to 35 minutes.

One thing about ink jet printers is that they print like a dot matrix – a strip at a time. Laser printers, on the other hand, seem to sit and think about printing for a long time before they start. The BJ-10e may not be substantially quicker than a laser printer but it certainly seems that way.

Save money...not time

Like the PCW internal printer there are two qualities of print. But unlike the PCW printer there is no difference in the time taken to produce those variable print qualities. The difference is in the amount of ink used, a matter which could have some influence on the more cost-conscious user.

Unlike other printers the print head for the bubblejet is contained in a cartridge that also holds the ink. Instead of putting in a new ribbon you fit a brand new cartridge, at the same time renewing the print head.

This obviously makes the cartridges quite expensive. But if you can prolong the life of the cartridge by using less ink it may seem worthwhile. This 'economy mode', as it is called, is still a good quality print, and produces better results than letter quality on the average dot matrix printer.

Softly, softly

The Canon must also be given an extra plus for its quietness. The makers claim that its operation noise level is 45 decibels. That may not mean much to you and I, but if the makers have gone to the trouble of finding that figure out you can assume it's good.

It goes without saying it is quieter than the internal printer (or any dot matrix or daisywheel printer, for that matter). In fact, the loudest noise produced is from the auto-capping, a system used to make sure the ink doesn't dry up and clog the printhead. If the printer has not received data for more than five seconds it 'auto-caps,' in effect putting the printhead away until you need it. In the process it makes a rather disconcerting clunk, all the more worrying to the new user as it happens when you are not expecting it.

At £345, the BJ-10e is reasonably priced, and compares very well with most 24- pin or laser printers.

I want to be an IBM

So what are the problems? A major problem for the PCW user is that the printer seems to have been designed very much with an IBM compatible PC in mind. Most printers offer emulations, a set-up that allows the printer to act exactly like another, more widely used printer. For instance, the PCW internal printer emulates an Epson printer. So the PCW works perfectly with any printer that has an Epson emulation.

Unfortunately the only printers the Canon seems to emulate are IBM Proprinters and IBM Graphics Printers. These are, of course, quite common among IBM compatible PC owners. But you have to look far and wide to get any PCW software that can handle it.

It is not impossible to find. Certainly later versions of LocoScript 2 with the right printer driver can be used with it. For more details see the 'Driving a Wordprocessor' box below.

Similarly, the latest version of MicroDesign 2 has an option specifically for the Canon bubblejet ➤

Graphic Details

Version 1.23 of Micro Design 2 (check your version by looking at the serial number at the bottom of the screen in the Layout section) has a special printer driver for the BJ-10e. Creative Technology will install the driver free of charge if you have an earlier version of Micro Design. However, you still have to make one little adjustment to make it work. You have to find the DIP switches – the 10 tiny switches at the opposite end from where print head sits. Then you have to set the seventh switch to on (the factory setting is off). If you don't do this you get line after line of code instead of nice pictures.

Printing from Micro Design 2 is possible - as long as you rest the seventh switch

Bubble sum

The Canon BJ-10e costs £345 (excluding VAT) and is available from Canon UK at Manor Road, Wallington, Surrey SM6 0HJ, telephone (081 773 3173). If you are making a telephone enquiry about the printer, you should ask for the Text and Data Sales Department. The printer should also be available in any high street office supplies shop, such as Rymans or Dixons.

Driving a word processor

Locomotive are one of the most advanced software houses in the business of writing printer drivers for specific printers. The newest versions of LocoScript 2 are set up to handle all kinds of printers and there are discs full of printer drivers – small files that convert the data in a LocoScript file into a form that a specific printer can understand.

Locomotive can provide a printer driver for an IBM Proprinter that works perfectly well with the Canon. To use the printer you may need to get an update to your version of LocoScript and a copy of the driver.

Using the printer driver is easy. You just need the file IBMPRO.PRI and INSTALL.DRV in the first column (group 0) of your LocoScript start up disc. You can move them there using the Copy function.

Then when you start up the program you will notice the file IBMPRO.PRI is automatically loaded into M drive. If you press [PTR] and [f5] you will also see that you nw have the option of using an IBMPRO printer. Move the cursor on to it and press the [+] key beside the space bar. That will choose the printer as standard.

You can do virtually everything you can do with the internal printer (except italics) although it doesn't seem to let you at features like the double height setting.

If you use the automatic paper feed this can confuse LocoScript a little. As it is used to having paper loaded in the internal printer before it starts it can't work out that the Canon loads the paper

after the Print command is given. If this happens use [f1] Actions to abandon the print and start again. It works the second time.

Protext is a bit more of a problem. As yet, there is no PCW printer driver written for the BJ-10e. Arnor say they have been having a lot of enquiries about the machine so there may be one on the way in the future.

We did try it with another Canon driver but it produced more problems than the ordinary PCW printer driver.

The advantage with Protext is its facility to let you write your own print codes in the Setprint section. Even without a printer driver the more adventurous souls can presumably create a reasonable driver for themselves.

Here is one tip, which shows the problems you have to face. When you use the PCW printer driver Protext always puts a mysterious upper case M in the top left hand corner of every document – a bit like Zorro with dyslexia.

Now it seems that when you work with an IBM Proprinter you don't reset the printer like you would the PCW printer. When Protext starts to print the first thing it always does is reset the printer. It sends through this command, the Canon gets confused and sticks an M in the corner instead.

You can get round this by going into Setprint and removing the code for reset (option four) although this is not an ideal solution as you may still have to reset some printer settings.

Printing from Micro Design using the PCW's native dot matrix printer is time- and ink- consuming...

...but using the BJ-10e drastically reduces the delay. As you can see, the result is much clearer as well

The Canon BJ-10e Printer can print styles

There is doubl characters an

It can print in Pica (10 cha

And of course in Elite (12 charact

It can even print in condensed (17 characters pe

And how about this for propor

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The BJ-10e's 'economy' mode allows you to produce good quality output, and save on ink consumption too..

The Canon BJ-10e Printer can print styles

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And it can print in tiny little l

..while the still speedy High Quality mode demonstrates the bubble jet technique to its very best advantage

AS WELL AS THE NORMAL SORT OF THINGS YOU CAN GET ON A CANON BJ-10e, YOU CAN ALSO GET DOUBLE HEIGHT TEXT.

Left: Among the extras which the BJ-10e offers is 'double height' text. To select this effect, you need to press the Pitch button three times. The effect can be produced in High Quality or 'economy' mode

family which seems to work perfectly once you have made a few minor adjustments to the printer. See the 'Graphic Details' box for the full story.

Apart from this you may have a few problems. You could try virtually any program and you might be lucky, although there are basic differences between the IBM and Epson emulations that make it unlikely that you won't encounter some problems.

Or you might be able to get the software company that wrote your favourite program to provide or write a printer driver for it. On the other hand you might find slight mistakes appearing or, worse still, you might find yourself totally unable to use a program, especially for printing graphics.

The vital information hunt

And, it has to be stated, the manual for the BJ-10e is not much help. Printer manuals, in general, are not usually very lucid tomes. Their authors seem to take a perverse delight in hiding vital information in the most obscure corner of the 14th appendix.

But this manual is better still. It seems to miss out the vital information altogether. It seems that there is also a programmer's manual available with a good deal more information. But unless you are reasonably computer literate, this could be even more confusing than the ordinary manual.

This is a pity, as there are a few details that you really ought to know when trying to get a printer to work. For a start, if you use the standard factory settings you will have great difficulty getting a £ sign to print out. Instead you will find yourself with a #, which is nowhere near as useful.

If you read the manual very carefully you will discover that there are two Code Pages (USA and Multi-lingual), settings that give you different characters. And in each of these Code Pages there are three character sets. Now it would appear that to get a £

instead of a # you can use character set two of either of these Code Pages.

And it would also appear that to change to these character sets you can use control codes (messages coming from the PCW) or dip switch settings (tiny little switches you find in all printers to set the defaults). We say "it would appear," for try as we may, we never managed to get a £ sign from this printer except by using the LocoScript printer driver.

This doesn't mean that it's impossible. It obviously isn't. But without a proper printer driver it isn't exactly easy either.

Making your pitch

In fact, setting the printer caused problems all the way through. For a small, quite inexpensive printer the BJ-10e has a reasonable choice of features. It only has one typeface – a perfectly pleasant serifed font.

But you can have this in virtually all the variations you would get from the PCW internal printer. It will give you pitches from five characters per inch (cpi) to 17 characters per inch.

Because of the clarity of its print, it has really readable superscript and subscript text. You can get proportional spacing and it will give you underline and bold, although it has to be admitted that there is not a major difference between ordinary print and bold. It won't give you italics, as there is no italics font in the printer.

The most exotic feature is a double-height text which looks quite impressive. And all of these come in economy and high quality standard.

The problem is how to get them. Like most printers you can set the pitch or print settings on the printer itself. But as the BJ-10e is so small there is no room for the usual LCD displays that tell you what the settings are.

Instead you have to press various buttons a set number of times. For instance, to get double high mode you press the Pitch switch three times (after

having pressed the ON LINE switch and the PITCH switch together). And to get economy mode you need to press the Economy/HQ button once (if you are in high quality mode, of course).

To get the right pitch you press the Pitch button (suitably enough). The four possible settings (10cpi, 12cpi, 17cpi and proportional) come up in order with each press. So, of course, you have to know what the current setting is. If, for instance, you want 17 cpi you press it twice if you are in 10cpi. If it's proportional that you are after, then you press it three times.

Admittedly it does give a little bleep every time it changes and the bleeps do appear to change in pitch according to what button you are pressing. However, it does also give the impression that you need perfect pitch to set anything complicated. And if you get completely lost, the only thing to do is switch off and start again.

Breaking the control codes

This shouldn't really be too much of a problem. Most people will spend far more time changing print settings from the computer, using control codes.

But here again life was complicated. In the time we had to play with the printer, we had great difficulty getting it to respond to any control codes. The manual was less than helpful. For instance, the much vaunted double height setting is not even mentioned in the list of control codes. We were told that to get it you gave the computer the codes for double width and condensed, although we have to admit that we never got it to work.

These criticisms are made with a heavy heart because the concept of the BJ-10e is very appealing and it has many good points. But unless you are quite computer literate you may well have real problems getting it to work properly. However, if you do manage to fathom the various settings, you will undoubtedly come to regard the BJ-10e as a very valuable printer. ●

Canon BJ-10e

Pluses
▲ Excellent print quality
▲ Truly portable and space saving.
▲ Quiet and fast

Minuses
▼ Not supported on the vast majority of PCW software
▼ Difficult to set, manually or with control codes
▼ Documentation is not helpful

Ease of Use	3/5
Documentation	1/5
Features	4/5
Performance	5/5
Value verdict	13/20

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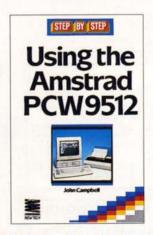
'Exploiting the Amstrad PCW 9512'

For more experienced users who want to use their machine as a full blown computer, this book not only examines the PCW as a word processor with LocoScript but also explores the range of other programs available. 300 plus pages with detailed information on LocoScript, LocoMail, CP/M, LocoFile, dBase II, SuperCalc 2 and Mini Office Professional.

'Using the Amstrad PCW 9512'

Designed for the relative beginner, this book has over 170 pages describing how to understand and use all the facilities of the Amstrad PCW 9512. The clear text and screen shots take you step by step through using the hardware, using discs and files, mailshots creating documents, page layout, CP/M and the printed page. In fact, everything you are likely to need for a successful future.

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To get your copy delivered at this inflation-proof price and recieve your free book, complete the coupon below and return it immediately. Alternatively, telephone our credit card hotline on 0458 74011.

I used to know a home computer pundit who swore by the Sinclair ZX81. This, according to him, was the trailblazer machine, the one that began the entire computer revolution. Yes, true enough, it used the same microprocessor as the present-day Amstrad PCW, but there were a few little deficiencies. My pal was undaunted.

Alright, the horrible plastic membrane keys were no good. So he'd added a real keyboard. Also, the picture output to the TV screen was terrible. He decided to add a real monitor. And of course the ZX81's data storage on slow, slow cassettes was something of a joke, so he had this huge adaptor box sticking out of the computer, interfacing to a hard disc drive.

That was a few years back, and, in moments of quiet reverie, I often like to imagine the state of his desktop today: a seething spaghetti of wires and ribbon cables entirely concealing Sinclair's original plastic box, trailing off to CD-ROM units and modems and, of course, the status symbol for home users ... a laser printer.

This all came to mind when I went mad and bought my own laser printer. It seems perverse to add a printer costing substantially more than the PCW, but there are other computers here too, and anyway I was feeling gloomy and wanted a new toy (too many computer peripherals are bought for no better reason than this).

In 1989, incidentally, the prices of laser printers began to slip visibly. They used to cluster around the £1500 mark, but there's now a fair choice at well below a thousand. You have to shop around with steely eyes, because the Recommended Retail Price con is in operation: "RRP is £1399 but we can offer it for an astonishing £800!" Just as with hi-fi systems, research invariably discloses that (a) nobody anywhere is asking the full RRP; (b) everybody else, especially mail-order outfits, is undercutting the first price you heard.

Me? I bought an Epson GQ-5000 by mail order for less than half the official fantasy price, and started connecting it to all the computers in turn. Would it work with a PCW? Oh, the agonising suspense.

The wally approach

I must confess to imitating one bad habit of real software professionals — rushing into things without looking at the instructions. ("Manual? We don' need no steenkin' manual!") My first discovery was that although I could *see* the alternate printer drivers called D630.PRI and FX80_NLQ.PRI on LocoScript's disc manager screen, the menu revealed by f6 "Settings" was adamant that no printers but MATRIX could be selected. Hmm. I capitulated, peeped into the manual, and, to my immense expectation, found nothing.

Group therapy

A bit of head-scratching solved this one. As supplied, the printer files were in Group 1. LocoScript was not happy unless you started with them in Group 0, so it could then copy them to Group M for use. I did the copying, went through the selection routine for FX80_NLQ again, and was told "Printer absent". Aha: LocoScript contacts the printer with a little chug when you load the start-of-day disc. Time to restart with Shift-Extra-Exit. No, on second thoughts: time to save the new printer setting (same f6 menu) and then restart.

I'd already connected the hardware. Our 8256 has a CPS8256 interface box on the back, mostly used for serial communication with IBM computers. A standard ("Centronics") parallel cable joined the box to the printer, which can be set up via little buttons on the front to imitate various other machines, including Epson FX models ... hence the choice above.

Excitement mounted.

Well, it sort of worked. A beautifully printed sheet slid out. The justification and pitch changes were all right (the printer's basic Courier 10 font looked a bit crowded in 12-pitch, but I could fix that by selecting another typeface with the printer buttons). Italics, boldface, underlining, super- and subscripted text, all tripped out with consummate ease.

Not so successful were the various unusual characters I'd put in the test document. If they were in the standard international character sets, they printed exquisitely: Continental accents like e-acute, for example. If not — meaning that LocoScript constructs them as graphics rather than just sending an ASCII code to the printer — they printed as spaces. This was the fate of my Greek and Old English test characters, and likewise of the copyright sign (which, maddeningly, *is* in the printer's character sets).

It seemed a hopeful start. I fiddled with the document and tried printing again. Instantly, nothing whatsoever happened!

Oops

No doubt anyone from Locomotive who happens to be reading this will be gnashing his or her teeth, and preparing a strong letter about how I

Laser Crazy

Intrepid explorer David Langford goes in search of an alternative PCW printer - with some very frustrating results...

should have bought their disc of printer drivers before even considering this experiment. All the same.... Although the laser gadget imitates an FX matrix printer pretty well, there is a failure of communication somewhere between it and LocoScript.

After one page, the software gets all petulant and insists that the printer is "waiting for paper". Meanwhile, a gigantic stack of nice clean A4 paper sits in the printer tray, ready to feed automatically.

The next logical (devoid though these situations generally are of logic) thought came the engineering ritual of "Keep changing the parts until it works." I swapped cables: no luck. I changed the model of PCW to a 9512; the procedure for setting up the printer was much the same, except that over there the dot-matrix driver file is called DMP.PRI.

Also, the 9512 meant another cable change: instead of the "Centronics at both ends" connector previously used, you need a standard *IBM* parallel printer cable.

I'm still looking at the 9512 disc manager screen, which after one printout is stuck saying "Paper please" (a phrase which makes me retort "Comma, please!").

This is the state of the art in PCW laser printing research at the crumbling, poverty-stricken HQ of Ansible Information. The saga could well form a suitable plot for a new soap opera. It certainly beats the storyline of some of the ones currently gracing our screens.

Imagine the tension: Will DL grit his teeth, ignore the anguished protests of Barclaycard, and buy more printer drivers? Will LocoScript then continue its mocking claim of "Waiting for paper"? Will our editor tell me to shut up on the subject? (My lips are sealed...Ed)

Stay tuned, or not, for another sleep inducing episode... ●

On the Mend

If only poor printout quality on the PCW9512 could always be the result of simple, relatively inexpensive faults- like a spent ribbon. This month, we show you how to keep the cost down when the damage looks more terminal

The PCW9512 printer suffers from an inordinate amount of wear and tear. Because the structure of the printhead is so complex - in comparison to that of the 8000 series machines - it is more than likely that sometime during its lifetime, it will develop a fault.

The daisywheel printer works much like a typewriter, by the somewhat brutal method of literally hammering an impression through a ribbon and on to a piece of paper. The repetitive stress which the whole mechanism is subject to means that, sooner or later, something is sure to break.

So, how can you tell when your printer needs attention? Check the quality of the printout. If the effect which you are getting is that of a generally faded printout, with loss of definition, then, in a great deal of cases, it is simply a question of replacing the ribbon. Now, look at the individual characters. If some of them are incompletely formed - or, are missing altogether - then it is likely that the cause is more serious. If this is coupled with a noticeable reduction in the noise which the characteristically clattery daisywheel printer is making, then there

is strong evidence to suggest a mechanical problem.

One of the most common faults developed by the 9512 printer mechanism is a cracked armature. The armature is the part of the mechanism which makes the hammer hit the daisywheel. It suffers from incessant mechanical shock and fatigue, and, although it is made of quite thick and sturdy plastic, it can easily develop a fracture after prolonged use.

The armature is situated to the right of the mechanism (see diagram below). It consists, as its name suggests, of a black plastic 'arm', which is attached on to a spindle by a small clip known as the E-ring. You can inspect the armature without having to completely dismantle the printer; simply lift the grey plastic flap at the front of the case, and remove the ribbon cassette. If you look down inside the printing device, the black armature is quite clearly visible.

If a crack has developed, it may not be instantly obvious - the one which the 8000 Plus printer developed was, quite literally, a hairline fracture. Use a magnifying glass or similar to inspect the area. If you see a crack, then it's time to take action. If you don't, there

could be another reason for the reduction in the quality of your printouts, and we've looked at a couple of these in the box below.

The armature can be replaced professionally, but it could cost up to £30 or £40, and, of course, it means that you will be without your printer for the duration of the repair.

The alternative is to repair it yourself. The operation involves quite delicate work, and, because of its location within the printer, the armature seems at first to be difficult to reach.
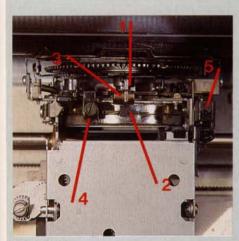
However, all it takes is a bit of patience, and a few simple tools (see Fact File in the margin). And, with the cost of obtaining the replacement part coming in at under £6.00, it will be well worth the investment in time and money to carry out the operation yourself.

Tools you will need are, at the most elaborate, a crosshead and flat bladed screwdriver, a pair of thin-nosed pliers, some vaseline and a cocktail stick. You could do the job with just a medium screwdriver and a pair of scissors. It should not take you more than about half an hour. Our thanks to Geoffrey Keen, Steve Mayer and Bernard Wilkie for their help in compiling this article. ➤

Common printhead faults - and how to repair them

1 **Hammer**
2 **Rubber resting pad**
3 **Hammer weights**
4 **Resting pad arm**
5 **Armature**

If you've examined the printer armature, and found that it is not damaged, there could be a problem with the hammer itself. Check the

following - they are simple to identify and easy to repair. Although these repairs have been successfully tried and tested, 8000 Plus can accept no responsibility for any damage caused to readers' printers as a result of our instructions.

Loss of the hammer weights
The weights (see diagram) are secured at either side of the printer hammer by a small metal pin. If that has snapped, then it's more than likely that the weights themselves are lurking somewhere inside the printer casing.

To re-position them, you can either find a pin small enough to fit into the hole through the hammer, or attempt to fix them with a tiny nut and bolt. Try using a small electric screwdriver to drill a hole of the necessary diameter through the back of the hammer head. Fix the weights back into their original position, and secure the nut and bolt. The pressure of the hammer should be then be restored, and printer output greatly improved .

Loosened resting pad
A parked hammer rests against a small rubber pad. The pad is attached to a flexible arm, which acts as both a shock absorber and a spring board

for the hammer head. If the pad is loose, it will not provide the hammer with the impetus required to strike the daisywheel properly - and it could damage the hammer head beyond repair.

First of all, check that the screw to the left of the resting pad arm hasn't worked itself loose. Tighten it if necessary.

Now, inspect the rubber pad itself. If you look carefully it is slotted on to the arm. Try pulling the top the pad towards you (ie away from the hammer). If it reveals a gap quite easily, then it needs some attention.

All you need to do is insert a piece of plastic into this slot to solve the problem. Any small piece will do, but the plastic clip which secures new ribbons is just the right thickness.

Cut off a small piece with a pair of scissors and insert it into the slot on the side of the arm towards you (ie on the other side of the arm away from the hammer). Make sure that the portion you are using is not too thick - this could result in excessive stress and even tearing. The pressure exerted from the rubber pad against the plastic insert and the hammer will be sufficient to ensure that the hammer head musters an adequate striking force against the daisywheel.

● Step 1:
The black plastic flaps are hinged in rather an awkward way. They need to be angled at about 45 degrees before they will slide free of their hinges.

● Step 2:
There are three securing catches at the inside front of the casing. If you find them stubborn to remove, use the flat bladed screwdriver to lever them free.

● When the roller is exposed, you will probably notice that it is covered with ink. It can be easily cleaned, using a sheet of kitchen towel soaked in white spirit. Rub the roller with the towel, turning it by hand. Either use a fresh piece of kitchen towel to dry the roller, or leave the white spirit to evaporate.

● Step 3:
If you lift the bundle of coloured wires free of the slot which takes them from the inside to the outside of the printer, you will find it easier to manoeuvre the circuit board.

● Step 4:
If you can find an object which will fit *inside* the casing to support the printer mechanism, do; it provides a very secure prop. A hard back book is ideal.

● Step 5:
Scissors are a good tool for this tricky job. Placing the tips of the blades inside the mouth of the E-ring clip, try opening the scissors, thus widening the gap sufficiently to release the clip.
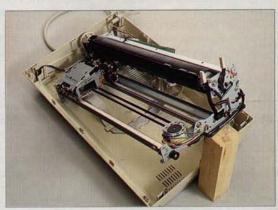
1 Before you do anything else, ensure that the computer is switched off at the mains. Disconnect the printer, and position it in front of you, so that the words 'Amstrad Daisywheel Printer' are reading the right way up Remove the front and back plastic flaps from the top of the casing, and take out the ribbon cassette. Using the crosshead screwdriver, loosen the three screws at the back of the casing. Repeat the procedure with the front two screws.
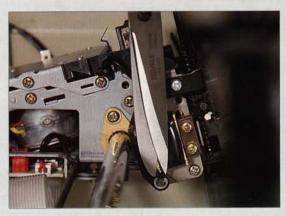
2 Now, slowly lift the case about two or three inches at the back. The screws can stay in their slots, but take care not to make any sudden movement which could dislodge them. As you lift up the back, the front will begin to rise. There are three securing clips on the inside of the front lip of the casing, which will prevent the lid coming off altogether. Use a lever action to release them. Lift the whole lid carefully away from the base, and put to one side.

3 Lift the bundle of black wires out of their clip on the right hand side of the base of the printer casing. At the front, lift the metal bar until the round rubber mounts are clear of their holders. Now, pull that same bar gently forward. There are corresponding rubber mounts - or feet - on the base of the back of the casing. These will come out of their housing as you pull the front bar forwards. Grip the roller with your other hand to help move the mechanism.
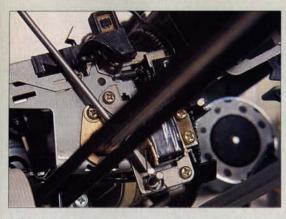
4 Gripping the roller once more, lift the whole internal mechanism free of the casing. It is quite heavy, and do not attempt to remove it completely. Move it over to the right until the platen knob (the plastic 'winder' which turns the roller) at the side can be repositioned inside the printer casing. Lift the right hand end clear of the case edge, and support it on a block or similar so that it is positioned at an angle of at least 45 degrees.

5 In this raised position, the black plastic armature is clearly visible at the rear right hand side of the daisy wheel carriage. Locate the small, silver coloured E-ring clip. Use either the tips of a pair of scissors, or a flat bladed screwdriver, to turn the mouth of the E-ring clip towards you. Now comes the tricky part. Press down gently but firmly on to the clip, and gradually ease it off the supporting spindle. Be prepared for it to fly off suddenly - it can happen!
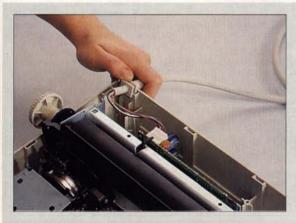
6 Retrieve the E-ring, and put it in a safe place. The black plastic armature sits quite loosely on the spindle. Push the edge of the flat bladed screwdriver behind the armature, and gently lever it away from the spindle. Let it drop down into the casing - it's too fiddly an operation to pick it out with any kind of tool. When it is free, take a look at it; the offending crack will be evident (beneath the tip of the screwdriver blade in our picture). Discard the armature.

7 Take the replacement armature, and keep it close to hand. Put a small smear of vaseline on the awaiting spindle. Using the flat bladed screwdriver, push the long arm of the spring which is attached to the spindle backwards. Now, put the new armature into position on the spindle, and let the spring arm rest on the back of it. The position that the spring now assumes will be where it 'wants' to be, so it won't be difficult to put into place.

8 Now, take the E-ring, and place it roughly back into its original position on the end of the spindle. Turn it so that the mouth of the clip is pointing away from you. Using the flat bladed screwdriver, ease the clip back into position on the spindle. This, again, is quite tricky, because of the pressure which you need exert on an area which is so restricted in terms of working space. It will click home eventually.

9 All that remains now is to reassemble the printer. Remove the block which has been supporting the end of the printer mechanism. Lift the left hand end of the mechanism so that the platen knob is returned to its position on the outside of the case. Keeping the front higher than the back, slide the rear feet, with their black rubber boots, back into their stops. Drop the front mounts down in to their holders. Press the wires back into the clip, and place the

10 Bring the bail bar forwards. Now, take the top of the printer case, and make sure that all the original screws are still there. Put the three clips back into position at the front of the case, making sure that they are correctly aligned. Let the lid down slowly until it fits properly all the way around. Using the crosshead screwdriver, secure the five screws back into position. The final step is to replace the black plastic flaps at the front and back of the lid.

COMPANY	ALL PCWs?	CARRIAGE CHARGE	TIME TAKEN
A1 Computer Services Telford (0952) 502737	Yes	£15	5 days
Avcom Electronics Kingsbridge (0548) 856279	Yes	n/a	7 days
Dictaphone Ltd, Leamington Spa (0926) 429124	Yes	n/a	(on site)
GMC Computers, Suffolk (0787) 280526	Yes	£10	7 days
MicroTyne, Newcastle (091) 261 4088	Yes	£10	24 hrs
Software Plus, Bath (0225) 448855	Yes	n/a	5 days
Somerset Micro Repairs (0278) 74528	Yes	£7.50	10 days
Suredata, Wembley (081) 902 5218	Yes	£11.50	24-48 hrs

Despite the fact that the printer repairs we have looked at above are easy to carry out, some of you may still prefer to hand your 9512 printer over to the professionals for repair work. Opposite is a round-up of some of the country's PCW repair centres. Prices vary according to the nature of the fault, but we found that most repairers are happy to offer a quotation for work over the telephone. All figures quoted represent averages; some may be subject to change.

In next month's DIY maintenance section, we'll be taking a look at the PCW8000 series printers. What danger signs can you look out for to indicate that the printhead is damaged? How can you prevent the development of faults? Is it easy – and financially viable – to carry out repairs in the home? Our step by step, fully illustrated guide leaves no stone unturned. Don't miss it!

Hints & Tips

● **Step 7:**
Use a cotton wool bud to apply the vaseline to the spindle head. You only need a very small amount, and a cotton bud is of an ideal size to access the area in question. Use one end of the bud to apply the vaseline, and the other to clean off the excess.

● **Step 8:**
To check that the E-ring is correctly in position, try turning it with the flat bladed screwdriver. If it rotates easily, it is in the correct place.

● **Step 9:**
Grip the roller when you are trying to reposition the printer mechanism. It is the most durable of all the elements inside the casing, so do not be afraid of holding it tightly.

● **Step 10:**
As you are preparing to replace the lid of the casing, check that the coloured wires at the front right hand side of the interior have not become trapped underneath the metal bar. If you then replace the lid, and find that it does not fit closely, lift it up and check for obstructions. The most likely culprits will be the circuit board, or the rubber feet at each corner of the mechanism's frame.
● Before you use the printer again, clean the bail bar and its cylindrical rubber grips with some kitchen towel doused in white spirit.

Listings

Martin Le Poidevin neatens up CP/M with a start-of-day menu, secures your files against corruption, and gives the dog's dinner to a spider

CPMMENU.BAS by Steve Mayer

One of the objections regularly levelled at CP/M is that it is so unfriendly. In December we published a listing that would help to change this, making your computer give you little messages instead of the bland "A>" prompt. But this did not tackle the problem of what to do with your prompt – what to type to make anything else happen. Making this information easily available is vital if you are giving your disc to somebody who does not know your computer.

Steve Mayer's MENU.BAS program does just that, providing a menu with up to nine options on it. The user makes his or her choice simply by pressing the correct number on the keyboard – and the chosen application then runs automatically. An additional nicety is that the options do not need to be listed by their file names – each option can be described in some detail.

Like December's PROMPT.COM the program that does all this work is a CP/M command file, which means that once you have the file on disc, you do not need to load up BASIC in order to make it work. But this time the initial program is in BASIC (PROMPT.COM, if you remember, used a strange beast called 'Assembler'), and the CP/M command is created from that.

Once you have typed in (and checked and saved) the Listing, run it. The first thing you will be asked is the name of the command file you want to create. Call this something memorable – your name would do!

Next you have 60 characters with which to give the menu screen a title. Again, something friendly and memorable might be in order – "Welcome to the friendliest CP/M environment in town" or the like.

Now comes the nitty-gritty of entering details of the programs themselves. This process comes in two stages. First you are asked for the "Program name". This is what you would type if you were loading the file from the A> prompt. All the program names you use must be CP/M .COM files, but since extensions are allowed, this is no great restriction. For instance,

if you want to be able to load a BASIC program (let's call it BOOTLACE) from the menu, the syntax when asked for the "Program name" would be "BASIC BOOTLACE".

Similarly, if you have several commands you would like to join together you could make a .SUB file and use the syntax SUBMIT BOOTLACE.SUB. The only thing to bear in mind is that all the files you intend to call must be on the one disc!

The second part of the program entry is the "message". This should be a gentle reminder of the contents of the program. For instance, if the program is SuperCalc, your program name will have been SC, but your message could be "This option will load up the SuperCalc spreadsheet program".

Once you have filled all the menu slots that need filling, hit [RETURN] instead of a program name, and your new command file will be created.

The program's final fling is to ask if you want the file to be run immediately. But since it is at present on the M: drive, this is unlikely. It is important to move it onto a disc quickly so that it is not lost. The way to do this is to exit BASIC (type SYSTEM [RETURN]), insert your CP/M disc and type PIP [RETURN]. Remove your system disc, insert the disc which contains all the files you want to run from your menu, and type A:=M:BOOTLACE.COM (using your filename instead of BOOTLACE, of course, and B: instead of A: if the disc is in the B: drive).

To work the menu, all you have to do is type the name of the .COM file at the A> prompt. The natural extension is to make the disc bootable (by putting the J*.EMS file on it), and including the menu file in a .SUB file.

The setting up screen. All the information that the computer needs to know is entered here. The .COM file is then written

The finished menu. Notice that the computer automatically adds option '0', which will take you back to C/PM

```
10  PRINT "COM Name (max 8 letters)";TAB(42)                        14B3
20  INPUT "",com$:com$="M:"+UPPER$(com$)+".COM"                     143C
30  PRINT "Title (max 60 characters)";TAB(42)                       14E9
40  INPUT "",title$:title$=LEFT$(title$,60):L=LEN(title$)           1C88
50  FOR n=1 TO 9                                                    065F
60  PRINT :PRINT "Program name";n;"or [RETURN] to finish:";TAB(42)  239B
70  INPUT "",prog$(n):IF prog$(n)="" THEN 100                       125D
80  PRINT "Message";n;TAB(42):INPUT "",m$(n)                        135C
90  NEXT                                                            048F
100 PRINT :PRINT "Writing ";com$;"... ";                            1299
```

The program begins by immediately asking for your inputs. Housekeeping comes later

```
110 last=n-1                                                        051D
120 CR$=CHR$(13)+CHR$(10):e$=CHR$(27):t$=CHR$(9):s$=SPACE$(6)       1620
```

```
130 cl$=e$+"E"+e$+"H":rev$=e$+"p":rof$=e$+"q"                        ØE89
140 m$(last+1)="EXIT to CP/M"                                        ØB91
150 final$=CR$+CR$+CR$+CR$+t$+t$+s$+"Press a key $"                  15DE
160 hL=INT(30-L/2)                                                   Ø63E
170 title$="* "+SPACE$(hL)+title$+SPACE$(60-L-hL)+" *"              148Ø
180 title$=cl$+CR$+t$+s$+e$+"r"+title$+e$+"u"+CR$+CR$+CR$            16E3
190 Lm=LEN(title$):a$=SPACE$(50)                                     ØDB8
200 FOR n=1 TO last                                                  Ø8AA
210 b$=a$:LSET b$=prog$(n):prog$(n)=b$                               1176
220 prog$(n)=prog$(n)+CHR$(Ø)                                        ØCØ7
230 m$(n)=t$+s$+rev$+STR$(n)+" "+rof$+t$+m$(n)+CR$+CR$               1382
240 Lm=Lm+LEN(m$(n)):NEXT                                            ØABF
250 m$(last+1)=t$+s$+rev$+" Ø "+rof$+t$+m$(last+1)+final$            124Ø
260 Lm=Lm+LEN(m$(last+1))                                            ØB63
270 Lm=Lm+355:Lm1=Lm MOD 256:Lm2=INT(Lm/256)                        1348
```

This is the housekeeping section. It also carries out all the calculations required - for instance, to determine the length of lines

```
280 OPEN "O",1,com$                                                 Ø68F
290 GOSUB 38Ø:PRINT #1,CHR$(last+49);                               ØF92
300 GOSUB 38Ø:PRINT #1,CHR$(Lm1);CHR$(Lm2);                         125F
310 GOSUB 38Ø:PRINT #1,title$;                                      ØD3Ø
320 FOR n=1 TO last+1:PRINT #1,m$(n);:NEXT                          1374
330 FOR n=1 TO last:PRINT #1,prog$(n);:NEXT                         156B
340 CLOSE                                                            Ø41F
```

The lines from 280 to 340 are the lines that write the program to disc, using familiar Jetsam functions

```
350 PRINT :PRINT :PRINT "Do you want ";com$;" to be run now (y/n) ? "; 2255
360 z$=UPPER$(INPUT$(1)):ON INSTR("NY",z$)+1 GOTO 36Ø,37Ø,49Ø       17CC
370 END                                                             Ø374
380 READ x$:IF x$="*" THEN RETURN                                   ØFED
390 hexnum=VAL("&H"+x$):PRINT #1,CHR$(hexnum);                      184B
400 GOTO 38Ø                                                        Ø4BE
410 DATA c3,Ø3,Ø1,Øe,Ø9,11,63,Ø1,cd,Ø5,ØØ,1e,ff                    ØEB9
420 DATA Øe,Ø6,cd,Ø5,ØØ,fe,ØØ,ca,Øb,Ø1,fe,3Ø,da                    ØF97
430 DATA Øb,Ø1,ca,57,Ø1,fe,*,d2,Øb,Ø1,21,*,11                      ØD1B
440 DATA 33,ØØ,d6,3Ø,3d,fe,ØØ,ca,36,Ø1,19,c3,2c                    ØEC6
450 DATA Ø1,e5,cd,4e,Ø1,d1,Ø1,8Ø,ØØ,1a,Ø2,Ø3,13                    ØEØB
460 DATA fe,ØØ,c2,3e,Ø1,Øe,2f,1e,ff,cd,Ø5,ØØ,Øe                    1006
470 DATA Ø9,11,5f,Ø1,cd,Ø5,ØØ,c9,cd,4e,Ø1,Øe,ØØ                    ØEA5
480 DATA cd,Ø5,ØØ,1b,6c,Ød,24,*                                    ØA2E
```

Although our program is in Basic, the CP/M file must be in machine code. The numbers are that code - they are what actually makes the menu work!

```
490 'Run the CP/M file                                              Ø9AC
500 RESTORE 55Ø                                                     Ø6EA
510 com$=com$+CHR$(Ø)                                               Ø82A
520 FOR n=1 TO LEN(com$):POKE 127+n,ASC(MID$(com$,n,1)):NEXT        1B7B
530 FOR n=Ø TO 11:READ k:POKE 50000!+n,k:NEXT                       1345
540 z=50000!:CALL z                                                 Ø724
550 DATA 14,47,3Ø,255,2Ø5,5,Ø,2Ø1,Ø,Ø,Ø,Ø                          ØB88
```

The final line of the program is another stream of machine code - which makes the menu run from the M: drive, if you so wish

BYTESIZE.BAS by David Miller

Although it is only 12 lines long, David Miller's little utility program packs a real programming punch. With these twelve lines you will be able to set a file so that it can only be read (and not erased, written to or otherwise amended); set a file so that it is a system file (a LocoScript 'hidden' file, that will not be displayed by CP/M's 'DIR'

command, and thus not clog up your display); and assess quite accurately the size of a file. All this from Basic.

How does the program do this?

Basically we are dealing with the vital part of your computer's memory called the File Control Block. This stores details of the file which is being considered – its drive, name, number

and other details that the operating system needs to have to hand.

The first thing we have to do is read in the name of the program we wish to investigate. This has to be changed **within the Listing itself**, in line 140. At the moment it is set up to deal with itself, but it could be set to any file on the current disc. Make sure that for ➤

```
140 f$="BYTESIZEBAS"
190 POKE r.o%,PEEK(r.o%)+128
run
BYTESIZEBAS is 4 blocks long
Ok
KILL "BYTESIZE.BAS"

CP/M Error On A: Read/Only File
BDOS Function = 13 File = BYTESIZE.BAS
A)BASIC

Mallard-80 BASIC with Jetsam   Version 1.29
(c) Copyright 1984  Locomotive Software Ltd
All rights reserved

31597 free bytes

Ok
LOAD "BYTESIZE"
Ok
140 f$="BYTESIZE"+chr$(194)+"AS"
190 POKE r.o%,PEEK(r.o%)-128
run
BYTESIZE±AS is 4 blocks long
Ok
KILL "BYTESIZE.BAS"
Ok
```

A silly thing to do. Having set the program to make the file Read Only it will not be deleted. But reset it, and you'll have to be careful!

your first experiments this is a file that you do not desperately need, or at least one which has a back-up elsewhere!

Change line 140 by typing **EDIT 140 [RETURN]**, and substituting the name of the file, with its filetype, between the inverted commas. There are a few points to notice here. We are working at a very exposed level of computing, and many of the usual safeguards are missing. For instance, CP/M usually converts small case letters to upper case. Not so here.

So you must put the name in capitals, you must have 11 characters, made up of the file name (padded out with blanks if necessary) with the filetype (eg BAS or COM) as the final three letters; and you must omit the full stop between name and filetype. Thus "D   COM" is valid, but "DCOM" and "d .com" are not!

Line 160 reads this into the FCB (line 150 sets the drive as "default" ie, the one you are using anyway). Line 170 does the business, and using an

internal CP/M function collects the size of the file, and returns it to a special place in the FCB (in our terms, fcb%+33). From there it can be read in line 180 using 'PEEK'.

However, the measurement may be in terms unfamiliar to you. This is because our function returns size not in terms of Kilobytes or 'k's (a unit of 1000 bytes, or pieces of information), but in terms of 'blocks'. A block is a mere 128 bytes long (CP/M also calls them records – try typing DIR [FULL] next time you are at the CP/M prompt with your system disc).

If you want the size of your file in terms of 'k's, then it is easily calculated by multiplying by 128 and dividing by 1000. For instance, BASIC.COM is 224 blocks long, which is 28.672 k. The DIR [FULL] command shows, less accurately, 28k.

Lines 190 and 200 also need explanation. CP/M knows that a file is to be considered a system file very sneakily – by adding 128 to the value of the second character of the filetype. In our Listing, the second letter of the filetype is A (BAS), it has an ASCII value of 66 (all the CP/M characters have codes, which is how the computer stores them – the whole set is in the back of your manual - page 113 for the 8000 series and page 547 for the 9512). If it were set as a system file, it would be stored as 194, although it is never displayed as such – CP/M knows to convert it back to "A".

But that is what line 190 does – it adds 128 to the second character of the filetype; line 200 simply cements that in memory, and the last two lines of the program (which can be omitted) create a special .SUB file, restart CP/M (in what

is known as a 'warm boot'), and execute the same .SUB file. In fact, this file has only got one command in it – DIRS, which shows all the system files. These will include, hopefully, the one you have just created.

Omitting lines 210 and 220 simply leaves you in Basic, rather than quitting to CP/M – a much better idea if you trust that the program has done its job!

Setting a file to Read Only (RO) follows exactly the same procedure, except that it is the first character of the filetype that has 128 added to it. Change line 190 to read 'r.o%' instead of 'sys%' at both occurences, and run the program exactly as before.

When all is done, try erasing the processed file. You will come up against error messages galore!

The only thing that now remains is to reset the files. A bit mind bending, but not difficult. The important thing to remember is that the file you need is no longer "BYTESIZEBAS", but BYTESIZEB[original character with 128 added to it]S. The easiest way to cope with this is to use a chr$() statement. In the case of our system file, therefore, the filename will be f$="BYTESIZEB"+chr$(194)+"S". A Read Only BASIC.COM would become "BASIC   "+chr$(195)+"OM". All that then needs to be done is to change line 190 to r.o% or sys%, depending on which you want to change, and to change (very important this!) the plus sign to a minus before the "128".

Purists will tell you that the CP/M "SET" command will do all this equally well. True, but this way you can do it from Basic, see what's happening, and still preserve those vital files from premature extinction!

`100 MEMORY HIMEM-10: bdos!=HIMEM+1: code!=HIMEM+5`	17A4
`110 fcb%=92: r.o%=fcb%+9: sys%=fcb%+10: size%=fcb%+33`	14A1

These lines set some of the important variables. fcb% is the location of the FCB, r.o% of the Read Only byte, sys% of he System byte

`120 FOR i%=1 TO 9: READ h%: POKE HIMEM+i%,h%: NEXT`	1632
`130 DATA 17,92,0,14,35,205,5,0,201`	0A17
`140 f$="BYTESIZEBAS"`	0983
`150 POKE fcb%,0`	060B

These lines read the name of the file into the the FCB. Make sure it has 11 characters and no full stop!

`160 FOR i%=1 TO 11: POKE fcb%+i%,ASC(MID$(f$,i%)): NEXT`	17D2
`170 POKE code!,35: CALL bdos!`	0C39

The internal function used in line 170 (bdos 35) computes the size of the file, and puts it into its slot in the FCB

`180 PRINT f$;" is";PEEK(size%);"blocks long"`	1460
`190 POKE sys%,PEEK(sys%)+128`	0DC7
`200 POKE code!,30: CALL bdos!`	0C1C

At the moment, the program will set BYTESIZE as a system file. Changing sys% to r.o% in line 190 will make BYTESIZE Read Only

`210 OPEN "O",1,"$$$.SUB": PRINT #1," DIRS": CLOSE 1`	142D
`220 POKE code!,0: CALL bdos!`	0B8E

The final two lines create a "$$$.SUB" file which will run after the system is warm-booted in line 220. bdos 0 is the function that forces the reboot

SPIFLY.BAS by Jack Burbage

And finally, after all that intense operating system investigating, here's a nice little something from Mr. Jack Burbage. You don't have to do anything, just sit back and wait until the spider gets its dinner.

Like Robert the Bruce, this spider knows that if at first you don't succeed...beep and try again! After a while it gets quite hypnotic.

At each go the page is redrawn, with the spider and the fly repositioned randomly; eventually the fly will hit the web, and an appropriate message appears. Of course, you can change that message to whatever you want - but make sure it's tasteful.

Because of its random nature, this could well prove the ideal executive toy: "I'll do it when the spider's eaten!"

The spider looks hungrily at the fly. This time it's close - but where will it be next?

```
10 e$=CHR$(27):B$=CHR$(7):C$=e$+"E"+e$+"H":S$=CHR$(220)+e$+CHR$(4)+CHR$(221)   1A47
20 lwing$=CHR$(221):rwing$=CHR$(220):head$=e$+CHR$(0):body$=CHR$(164)
      :web$=CHR$(149)                                                          2452
30 DEF FNat$(r,c)=e$+"Y"+CHR$(32+r)+CHR$(32+c):RANDOMIZE (PEEK(64504!))
      :PRINT C$                                                               1EDC
40 INPUT"'SPIFLY' by Jack Burbage.   Press [RETURN] to start",start$:PRINT C$ 2988
50 y=INT(RND*25):x=INT(RND*84):z=x:FOR Y=1 TO y:PRINT TAB(x+0.5)web$:NEXT     25E4
60 PRINT TAB(x)S$;B$:PRINT TAB(x+0.5)CHR$(178)                                1384
70 r=INT(RND*25):c=INT(RND*84):PRINT FNat$(r,c)head$:PRINT FNat$(r+1,c)body$  238D
80 FOR W=1 TO 20:PRINT FNat$(r+1,c-1)lwing$;FNat$(r+1,c+1)rwing$:
      SWAP lwing$,rwing$                                                      29A9
90 IF c=z OR c=z-1 OR c=z+1 THEN IFr<=yTHEN PRINT STRING$(15,B$)FNat$(29,42)
      "GOTCHA":END                                                           2758
100 NEXT:PRINT C$:GOTO 50                                                     0DA1
```

If you (or other people) get fed up with the beep, change CHR$(7) in line 10 to CHR$(0)

GLITCH ALERT!

Oh dear. Glitches have been sighted again in the Listings pages.

February's Listings included the mindboggling PCWTEXT program. Mindboggling for two reasons: firstly we managed to call a block with four sides and four corners a 'triangle' (the 8000 Plus team are still stuck on squaring the circle, let alone rectangling the triangle);

secondly because when the program is run, these small rectangles tend to become displaced, and pick up a stream of trailing hash marks. This totally destroys any clever graphics you may have designed.

The solution, arrived at after much consideration, is to retype lines 330 and 340 as follows:

330 IF dat$(acc,p)<>"#" THEN GOTO 340
      ELSE PRINT #1,i$;:GOTO 360

340 IF dat$(acc,p)<>"" THEN GOTO 350
      ELSE PRINT #1," ";:GOTO 360

Apologies to all involved, and many thanks to those who suggested many varied escape routes!

BELTER2.BAS

Many moons ago we published a Listing called "BELTER.BAS", a basic analysis program which provided information on any program run through it - the number of different variables used, how many times each of them appeared, where and how often all the commands were used, and so on.

However, there were some problems with it. Not least of these were the fact that it could not deal with programs of any great length.

Dr.Arthur Baker, however, wouldn't let it lie, and has been working away to improve the original. The result of his efforts is BELTER2.BAS, which ought to be able to deal with just about any Basic programof whatever size.

Unfortunately, the improvement has taken the size of the program beyond anything that could be printed in Listings. However, we are prepared - just this once, mind you - to copy it on to any blank, formatted discs that arrive at the 8000 Plus offices accompanied by an adult SAE (even better, a jiffy bag). Please mark your requests with "BELTER.BAS' on the outer envelope.

How to type in a listing:

The first thing to do is to boot up CP/M, by loading the disc into the machine at turn-on time; when it settles down type in the word BASIC and hit [RETURN]. You will be given a bit of information about Mallard BASIC, and the prompt "Ok". You can now begin to type in the program.

Each line begins with a number. This must be typed in, along with the text that follows it, but not the list of numbers on the right hand side (these are part of a checking procedure we publish from time to time). Make sure that what you type is exactly what is on the page, especially in terms of punctuation. One semi-colon instead of colon may not seem much to you, but it could spell disaster for the program. Be careful, as well, that you differentiate properly between "0" (the number zero) and "O" (the capital "O"), and between "1" (the number "1") and the lower case "L". From such small errors, great crashes flow.

If you do spot an error in a line as you are typing it in, use the cursor keys to go back and amend it. Once you are sure that a line is typed in correctly, then hit the [RETURN] button and go on to the net one. If you subsequently notice a mistake, type "edit", followed by the line number and [RETURN], and you will be given the chance to make your correction. Once you have typed in the whole

program, check that everything is there as it should be by typing "list" [RETURN]. The whole program will scroll past you. To stop it at any point press [f5], and to restart it press [f5] again.

If all is present and correct, save your program to disc by typing "save" followed by the program name, which must be in quotation marks. Now comes the moment of truth. Type run [RETURN]. If all has gone well, it will work first time.

If not, you may be given an error message, often with a line number attached (which may or may not help – it can often be that the line over which the computer gets stuck will be perfectly OK in itself, but it just happens to be the point at which an earlier mis-type becomes critical) so that you can rectify the fault. If there is no fault there, or no line number, check the rest of the program with a fine toothcomb.

And if you have made any changes or improvements, don't forget to save the updated version of the program (use the same filename and the old, bugged version will automatically be deleted from the disc).

When you want to use the program again you must first load BASIC as before, the type: "LOAD "filename" [RETURN]. It can then be used as before, by typing RUN [RETURN].

The Good Club & Training Guide

With such a variety of software for the PCW currently on the market, learning how to get the best out of your machine can often seem to be a daunting treck through poorly-written manuals and stodgy jargon.

For the would-be LocoScript, CP/M or BASIC expert, a PCW User Club can provide an ideal source of knowledge. An informal atmosphere can be very productive – and there's no better way to learn than with the one-to-one help of an expert.

Alternatively, you could recruit the aid of such an expert to your home, or attend specialised courses part-time in colleges and schools.

Below is a selection of clubs and training organisations which can offer such help. Why not make contact; it could be an inexpensive, effective way to a better understanding of what your PCW can do for you.

Clubs

York Amstrad Computer Club
Enterprise Social Club, 17 Nunnery Lane, York (address for meetings only)
Enquiries: **Simon Williams 0906 40164**

Scotwest.PCW
19, Porton Place, Old Greenock Road, Bishopton, Scotland
Enquiries: **Iain Lang 0505 863916**

Ground Floor User Group
Holme Street, Hebden Bridge
West Yorkshire
Enquiries: **Jae Campbell 0422 844991**

Retford PCW User Group
14 Machin Close, Tuxford, Nr Newark
Nottinghamshire NG22 OJZ
Enquiries: **Paul Tew 0777 870038**

CP/M and MS DOS User's Group
43 Birkbeck Road, Wimbledon,
London SW19 8NZ
Enquiries: **David Nesbitt 081 543 0824**

Hampshire PCW User's Group
Unit 5, Cable Street, Northam,
Southampton, Hampshire
(address for meetings only)
Enquiries: **Paul Day** (above address)

Hereford Computer Club
18 Church Street, Hereford
Herefordshire HR1 2LR
Enquiries: **David Rose 0432 267123**

Teesside Amstrad User Group
8 Knayton Grove, Greenvale,
Stockton-on-Tees, Cleveland
TS19 7RW
Enquiries: **Gladys Baker 0642 580018**

M25 User Group
58 Islip Gardens, Northolt
Middlesex UB5 5BY
Enquiries: **Tony Brown 081 841 3666**

Littlemore Amstrad PCW User Group Peers School (Adult Education Centre), Littlemore, Oxford
Enquiries: **R G Hughes 0865 242720**

The Worldwide Amstrad Computer Club (WACCI)
9 South Close Twickenham TW2 5JE
Enquiries: **Steve Williams** (see above)

Training

Banna Word Processing
29 New Bond Street, London W1Y 9HD
Subjects: Loco 1&2, SuperCalc,
Enquiries: **071 493 3336**

Computer Training Centres UK Ltd
Exchange Buildings, Upper Hinton
Road, Bournemouth BH1 2HH
Enquiries:**0202 299676**

Dynamic Sales and Training
47 Goldsworth Road, Woking, Surrey
Subjects: LocoScript 1 & 2, dBase,
dBase II, SuperCalc 2
Enquiries: **0483 756914**

Headline Communication Ltd
PO Box 22, Hereford HR4 8UW
Subjects: LocoScript 1 & 2, CP/M,
dBase II, SuperCalc 2
Enquiries: **0432 271598**

Horsham Office Skills Training
Unit 2, 24 London Road, Horsham,
West Sussex RH12 1AY
Subjects: LocoScript 1 & 2, Wordstar
Enquiries: **0403 211440**

John S Blandford
15 St Albans Road, Sandridge, St
Albans, Herts AL4 9LA

Subjects: LocoScript 1 & 2, LocoMail,
Mallard BASIC
Enquiries: **0727 59913**

Linkom Training
32 Hill Street, Totterdown, Bristol
Subjects: LocoScript 1 & 2, Sage
Accounts
Enquiries: **0270 717435**

No Hassle Computing
36 Tantallon Road, Balham, London
SW12 8DG
Subjects: LocoScript 1 & 2, Supercalc,
Cracker, Masterfile 8000
Enquiries: **081 675 3139**

Molesley Education
Flat 3, 10, Matham Road, East Molesley
Subjects: LocoScript 1 & 2, Loco PC
Enquiries: **081 941 1364**

Office International
247-257 Euston Road, London
NW1 2HY
Subjects: LocoScript 1 & 2, Cardbox,
NewWord, Supercalc 2, Sage Accounts,
LocoMail
Enquiries: **071 387 9339**

Off the Shelf Training Services
5a West Street, Bognor Regis, West
Sussex, PO21 1UB
Subjects: LocoScript 1 & 2, LocoMail
Enquiries: **0243 827778**

Rodesign
195 Milwards, Harlow, Essex CM19 4SJ
Subjects: Micro Design, ProScan
Enquiries: **0279 444313**

Victoria College
13 Dalton Square, Lancaster, LA1 1PL
Subjects: Loco 1&2, Supercalc, dBase,
WordStar, Sage Accounts, Stop Press
Enquiries: **0524 33996**

Wetherby Office Training
Cambridge House, 39 Cambridge St.,
Wellingborough, Northants NN8 1DW
Subjects: Loco 1&2, dBase, Supercalc 2
Enquiries: **0933 222400**

Wetherby Price Training
30 New Canal, Salisbury, Wiltshire
Subjects: LocoScript 1 & 2, CP/M,
Sage Accounts
Enquiries: **0722 24005**

Stop Press!
The latest training centres!

**Fields Easy
Computer Training
16, Moyclare Park
Baldoyle, Dublin 13
Ireland
Subjects: Loco 2,
Loco PC, Micro
Design, Sage
Accounts, Money
Manager
Contact: 088 561291**

**Computer Services
(Kent), 2 Church
Road Business
Centre,
Sittingbourne, Kent
ME10 3RS.
Subjects: Loco 2,
LocoFile, LocoMail,
Supercalc 2, Money
Manager,
MicroDesign.
Contact:0795 421732**

**Westwind Computer
Education Centre,
13b Church Street,
Wellington, Telford
Subjects: Loco 2,
LocoMail, Protext,
Supercalc 2,
Masterfile, dBase 2
Contact: 0952 56573**

**Electric Words
232 Arbroath Road
Dundee DD4 7SB
Subjects: Loco 1&2,
Loco PC
Contact: 0382
462640**

Tipoffs

The best PCW advice anywhere!

Is LocoScript making you feel a fool? Does BASIC keep playing tricks on you? Find CP/M a bit of a joke? Don't be an caught out, read Tipoffs, the best way to have the last laugh on a troublesome PCW. In these pages you'll find invaluable advice and help on LocoScript, LocoFile, LocoMail, BASIC, Mini Office, Micro Design and a whole lot more. To show we're not joking, John Eade of Salisbury is getting a cheque for £30 for his smart LocoScript tip. If you've found a way to trick any well-known program into doing something useful that it never thought it could, tell us – the best win hard cash. Send them to Tipoffs, 30 Monmouth St, Bath BA1 2XF. It's Freepost!

Vertical software

You can get "vertical printing" easily in LocoScript. Type the text as normal. Then set a right tab at the far right hand side and immediately before the text, press [ALT] [TAB] then [RELAY]. The text aligns down the page one letter to a line.

Can anyone think of a use for this?

J Coleman, Penkridge, Stafford

8000 Plus: How about preparing labels for the spines of thin booklets, discs or cassettes? When a disc is in the drive you wouldn't than have to crook your neck to read it. Unfortunately this won't work in LocoScript 2, so those Chinese characters you designed in Locochar will have to carry on going right to left and downwards.

Screen printing

Last month you published a tip showing how in a BASIC program you can print something to screen, printer and a file simultaneously ("In triplicate", p. 73). Here is another way of doing it. Just run the following BASIC listing and thereafter all PRINT # commands go to screen and printer as well.

```
10  REM Daniel Evans wrote this
20  h=HIMEM : be=h-30 : MEMORY
    be-1
30  r1=be : r1c=r1/256 : r1b=INT(r1c)
    : r1a=256 * (r1c-r1b)
40  FOR n=r1 TO r1+28 : READ d :
    POKE n,d : NEXT
50  DATA 229, 213, 197, 245, 205,
    116, 94, 205, 100, 94, 241, 193,
    209, 225, 205, 116, 94, 229, 213,
    197, 245, 205, 90, 94, 241, 193,
    209, 225, 201
60  IF PEEK (337) = 50 THEN
    ap=24162 : GOTO 80
70  ap=24328 : POKE r1+5,26 :
```

```
    POKE r1+6,95 : POKE r1+8,10 :
    POKE r1+9,95 : POKE r1+15,26 :
    POKE r1+16,95 : POKE r1+22,0 :
    POKE r1+23,95
80  POKE ap,r1a : POKE ap+1,r1b
```

So, if you now have lines like
1000 OPEN "O",1,"A:OUTPUT"
1010 PRINT #1,"This is a message"
1020 CLOSE
then the message **This is a message** is sent to the file A:OUTPUT, the screen and the printer, all at the same time. This works on the PCW9512 as well as the PCW8256/8512.

To return to normal, type **POKE 24162,116 : POKE 24163,94** on the 8000s or **POKE 24328,26 : POKE 24329,95** on the 9512.
Daniel Evans, Putney, London

8000 Plus: Thanks. In last month's listing for the tip "In triplicate", by the way, it should have said DISPLAY instead of TYPE – sorry!

Condensed plot

When printing an ASCII file in CP/M, how can I get it print out in 17 pitch instead of the usual 10 pitch?
P Chambers, Plymouth, Devon

8000 Plus: Here are two ways of printing out an ASCII file in CP/M. Say the file is called READ.ME.
*1) At the A>, press [ALT] **p** (the PCW beeps) and then type*
type read.me [RETURN]
*The printer prints out the contents of READ.ME in 10 pitch. When it's finished, press [ALT] **p** again (the PCW doesn't beep).*
2) With a disc containing PIP.COM and READ.ME in the drive, type
pip lst:=read.me [RETURN]
again the printer uses 10 pitch.

To change the printer to make it print in condensed instead of the usual 10 pitch takes two steps.
1. First make a file called say

CONDENSD which contains the single line
↑'15'
*(the arrow is [EXTRA]**u**). You can make the file using PIP as follows. With a disc containing PIP in the drive, type*
pip condensd=con: [RETURN]
and then
*↑'15' [RETURN] [ALT]**j** [ALT]**z***
and when the A> reappears the file has been created.
2. Insert a disc into the drive that contains both SETLST.COM (side 2 of your master disc on an 8256/8512) and CONDENSD. Type at the A>
setlst condensd [RETURN]

From now on until you switch off, all output on the printer will be in 17 pitch (unless a CP/M program changes it, of course).

To reset to normal, press [PTR] [left cursor] [+] [EXIT].

Alarming tip

If you're spell checking a long document in LocoSpell – especially one that has been checked before and may only have a couple of doubtful words in it – you can have a very long wait between words that are flagged up as doubtful.

But you can make the PCW beep at you when a word comes up, letting you go away and make a cup of tea or whatever. After pressing [RETURN] to start LocoSpell on it way, press [EXIT] and walk away. When it comes to a word, it'll then try to do something with that [EXIT] you pressed; and, because LocoSpell won't allow you to [EXIT], will beep in frustration – alerting you that it's found a word to be dealt with.

Similarly, after dealing with each doubtful word, press [EXIT] again, and you'll get another alarm call when the next word comes up.
B Dimmock, Burgess Hill, W Sussex

Morse inspector

I've tried to type in the enclosed morse code program from an edition of Practical Wireless on the PCW but it doesn't work.
J Rider, Rugby, Warwicks

8000 Plus: The BASIC program you sent won't work on the PCW because it has commands that the PCW's BASIC – Mallard – lacks. 8000 Plus published a program to beep out any message in Morse in issue 12 (September 1987). If anyone wants a photocopy, send us an sae marked 'Morse code'.

Happy memories

Working in LocoScript's M drive makes everything much faster – but if you forget to copy the files before you switch off then you lose all your work.

Absent-minded types might therefore find it useful to stick a small piece of card over the on/off switch with a piece of blu-tack that says "Save memory file before turning off!".
WJ Bickers, Bury St Edmunds, Suffolk

Between sheets

The sheetfeeder supplied with the PCW9512 will automatically feed a new sheet of paper after finishing a document. If you want to print the next document on a different type of paper – headed instead of plain paper perhaps – don't try to remove the sheet in the printer. Instead, put a blank first page in your next document with [ALT] [RETURN] and change the paper in the tray before printing. That way the paper that was in the printer is blank and can be re-used, while the document itself prints out on the correct paper.
Graham Johnston, Bothwell, Lanarkshire

Well phrased

I understand it is possible to do very sophisticated things in Protext phrases but I'm not sure how. Can you give some examples?
Martin Flanagan, Workington, Cumbria

8000 Plus: Consider the effect of the following three phrase assignments typed in at the a> prompt:
key b ↑24↑b [RETURN]
key c 'clear↑13↑y' [RETURN]
key e '↑254↑sw↑13↑clear↑13↑y ↑254↑l env↑13↑↑253↑↑29↑ ↑15↑↑254↑p↑13↑' [RETURN]
        The first makes [EXTRA]b insert the code for bold in the text. The second makes [EXTRA]c clear out the file in memory. The third is quite involved. Suppose you have marked out the recipient's address at the top of a letter as a block, and on the disc have a file called ENV which has margins set up for printing on envelopes. If you just press [EXTRA]e, the program will print out that address on an envelope for you with the right margins.
        The table below should explain. It has the codes for use in phrase files, when they must be put in between two up arrows ([EXTRA]u or [EXTRA] semi-colon). (They can also be used in exec files when they must be put in between two vertical line characters). Note that a great deal of things in Protext can be done either by a key like [RELAY] or by a command sequence like [ALT]f. Both of the alternatives are given here.

Key sequence	Code	Effect
[ALT]@	0	beginning of sequence on block or unit marks
[ALT]a	1	swop two characters
[ALT]b	2	switch box mode on/off
[ALT]c	3	centre line
[ALT]d	4	insert default ruler
[ALT]e	5	delete to end of line
[ALT]f or [PARA]	6	format paragraph
[ALT]g	7	goto (Page, Line or Column number)
[ALT]h	8	help
[ALT]i	237	insert blank line
[ALT]j	10	turn justification on/off
[ALT]k or [CAN]	11	erase block markers
[ALT]l	12	go to cursor position before last big jump
[ALT]m or [PASTE]	238	move block to current cursor position
[ALT]n	14	introduce hard hyphen or hard space
[ALT]o	15	move block from other file
[ALT]p	226	turn page mode in bar at top of screen on or off
[ALT]q	17	scroll up full screen
[ALT]r	18	restore previous ruler line
[ALT]s	19	show spaces as faint triangles on screen
[ALT]t	20	show tabs and [RETURN]s as arrows
[ALT]u	21	restore last deleted piece of text
[ALT]v	22	insert arrow symbols (with cursors) or hide/show printer codes (by pressing v again) or turn help off (press h)
[ALT]w	23	turn word wrap on or off
[ALT]x	24	introduce printer control code
[ALT]y	25	swop to other document
[ALT]z	26	scroll down full screen
[TAB]	9	insert tab
[SHIFT] [TAB]	228	move to next tab position (swop the above if in overwrite mode)
[ALT] [TAB]	225	turn insert/overwrite mode on/off
[DEL→]	16	delete character under cursor
[DEL←]	127	delete character before cursor
[SHIFT] [DEL→]	229	delete word right
[SHIFT] [DEL←]	211	delete word left
[ALT] [DEL→]	5	delete from cursor to end of line right
[ALT] [DEL←]	212	delete from cursor to end of line left
[ALT] [CAN]	230	delete whole line
[SHIFT] [+] or [SHIFT] [COPY]	233	set block markers
[ALT] [CUT] or [CUT]	232	cut block
[ALT] [COPY] or [COPY]	234	copy block
[ALT]m or [PASTE]	238	move block to current cursor position
↑	240	cursor up
↓	241	cursor down
←	242	cursor left
→	243	cursor right
[SHIFT]↑	244	move one line up
[SHIFT]↓	245	move one line down
[SHIFT]←	246	move one word left
[SHIFT]→	247	move one word right
[ALT]↑	248	move almost one screenful up
[ALT]↓	249	move almost one screenful up
[ALT]←	250	move to left hand edge of line
[ALT]→	251	move to right hand edge of line
[ALT]< or [ALT][PARA]	218	go to beginning of paragraph
[ALT]> or [PARA]	219	go to end of paragraph
[ALT](or [ALT][PAGE]	220	go to beginning of page
[ALT]) or [PAGE]	221	go to end of page
[ALT][or [ALT][DOC]	27	go to beginning of document
[ALT]] or [DOC]	29	go to end of document
[ALT]*	222	split line at cursor
[ALT]+	223	join line at cursor
[ALT].	28	convert to lower case
[ALT]/	231	convert to upper case
[ALT]-	227	insert soft hyphen
[ALT] [SPACE]	235	no effect!
[RETURN]	13	insert return
[ALT][RETURN] or [SHIFT][RETURN]	236	move to beginning of next line
[+] or [COPY]	224	recall last command typed which had four letters or more
[STOP] or [EXIT]	252	change edit/command mode
	253	enter edit mode
	254	enter command mode

To use these in an EXEC file, make a file called say XYZ with the codes in bars (/). Then at the a> type x xyz and the commands will be executed.

Clear headed

Diagrams of chemical structures can be produced very easily in a desktop publisher such as Micro Design.

The trick is that even the most complicated organic molecules are made up of simple components. So, create a number of "area files" each of which contains one grouping - a particular radicle, benzene ring or CH_3 group for example.

To make a structure, load each unit in turn onto the "page", move them to the desired position, and insert the bonds by drawing single or double lines as usual.

If it sounds a bit of a headache, it isn't - and the diagram of the molecule for aspirin shown here should prove the point!
Dr M Thomas, Newport, Gwent

The "bits" needed   "Aspirin"

Graphic demonstration

In the user manual of my 8256 there is a section on controlling the graphics output of the printer. But it's gobbledygook and explains nothing! I want to be able to create and print sets of graphics from BASIC programs with text as well. Can you explain?
Kevin Sale, Castle Vale, Birmingham

*8000 Plus: The basic idea is this. The BASIC command **lprint chr$(27) + "L" + chr$(50) + chr$(0)** followed by a series of digits in **chr$()**s will get the printer to print out a fifty-dot-wide line of graphics (not on a 9512) whose shape is determined by the digits.*

You can make it print any width you like other than 50, and by putting several graphics lines together, can build up a picture of any size (less than 960 dots, which is the limit of the printer anyway).

The first thing to do is your design. Suppose you want a musical symbol for your club newsletter. Draft out your design on graph paper; then fill in squares so that the block pattern resembles your design, but make each 'square' of your design actually twice as high as it is wide. Then the appearance of your design will be roughly the same as the printed output. Suppose your design is as below:

The next stage involves a lot of addition, so a calculator would be useful. Split the design into rows, each eight deep; each row corresponds to a line on the printout. Then take each row in turn and write the numbers 1,2,4,8,16,32,64,128 at the side, up from the bottom, one number to each line. The design above then becomes:

For each column, note the number you get by adding up all the numbers with black squares in them. The top half of the note design would give the following. The first nine columns are zero, as there are no black squares there. Columns 10 and 11 give

16+8+4+2+1, or 31; columns 12 to 15 are all 16+8, or 24; column 16 is 32+16, or 48, and so on.

For the top half of the note design you end up with thirty-one figures, one for each column, viz. 0, 0, 0, 0, 0, 0, 0, 0, 0, 31, 31, 24, 24, 24, 24, 48, 48, 48, 48, 48, 96, 96, 96, 96, 96, 192, 192, 192, 192, 255, 255; and for the bottom half, similarly, you get 6, 7, 15, 15, 15, 15, 15, 15, 15, 254, 252, 0, 0, 0, 0, 0, 0, 0, 0, 48, 56, 120, 120, 120, 120, 120, 120, 120, 240, 224.

*Now you can write a short BASIC routine to print out this lot. In essence it is just the command **lprint chr$(27)+"L"** followed by a few numbers in chr$().*

The first digit is the number of dots wide your pattern is. If it's bigger than 256, keep subtracting 256 until it's less than 256; so a 31 wide pattern would have 31 here, a 300 dot pattern would have 44, a 600 wide pattern 88.

The next digit is the number of times you can take 256 from the width of the pattern. 31 would give 0 here, 300 would give 1, and 600 yields 2.

*So, for a 31 wide pattern you'd have **lprint chr$(27) + "L" + chr$(31) + chr$(0)**; for a 300 dot wide pattern, **lprint chr$(27) + "L" + chr$(44) + chr$(1)**; for a 600 wide pattern, **lprint chr$(27) + "L" + chr$(88) + chr$(2)**.*

*Next you put all the digits you added up above; so the bottom half of the note design will be printed out by the command **lprint chr$(27) + "L" + chr$(31) + chr$(0) + chr$(6) + chr$(7) + and so on up to + chr$(224)**.*
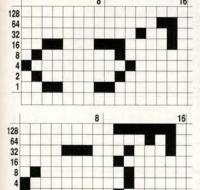
The problem with this when it prints out is that the vertical spacing of the dots is quite wide – your design comes out looking very thin and 'liney'. By a sneaky bit of cunning, though, you can overprint each line of your design twice or more, each overprint slightly displaced downwards, filling in those ugly gaps.

*The BASIC command **lprint chr$(27) + "J" + chr$(number)** will advance the paper that number of 72nds of an inch. Coupled with the command **lprint chr$(13)** which returns the printer to the left-hand margin you get an easy way of overprinting a part of a graphic, slightly displaced downwards each time, any number of times. Two*

seventy-seconds seems to work quite well (see line 50 and 70 below); you can experiment with other numbers.

*To get the lower half of your note design lining up nicely with the top half, you'll need an advance equivalent to half a line space after printing the top half. You get this by **lprint chr$(27) + "J" + chr$(24) + chr$(13)** though again you can experiment with other numbers.*

The following short listing would therefore print out your 31-wide note design on paper in two halves, each half being printed three times.

```
5   FOR k%=1 to 2
10  g$=CHR$(27) + "L" + CHR$(31)
    + CHR$(0)
20  FOR j%=1 TO 31 : READ d% :
    g$=g$ + CHR$(d%) : NEXT j%
30  DATA 0, 0, 0, 0, 0, 0, 0, 0, 0, 31,
    31, 24, 24, 24, 24, 48, 48, 48, 48,
    48, 96, 96, 96, 96, 96, 192, 192,
    192, 192, 255, 255
31  DATA 6, 7, 15, 15, 15, 15, 15, 15,
    15, 254, 252, 0, 0, 0, 0, 0, 0, 0, 0,
    0, 48, 56, 120, 120, 120, 120, 120,
    120, 120, 240, 224
40  LPRINT g$;
50  LPRINT CHR$(27) + "J" +
    CHR$(2) + CHR$(13);
60  LPRINT g$;
70  LPRINT CHR$(27) + "J" +
    CHR$(2) + CHR$(13);
80  LPRINT g$;
90  LPRINT CHR$(27) + "J" +
    CHR$(24) + CHR$(13);
100 NEXT k%
```
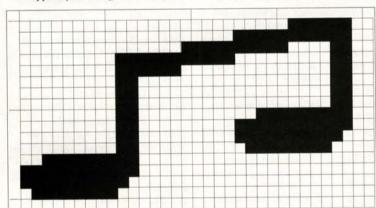
On running the program you print out:

*To stick text into all this, just put a line like **lprint "This is text"** in it.*

This isn't the whole story. All the above 'listing' does to get over the gaps between horizontal lines is overprint the same pattern a little down from the last. The note printed out above suffers from a little jaggedness in the sloping line. But for really smooth results you may need a different pattern overprinted.
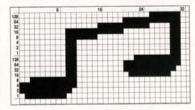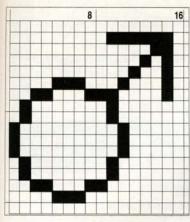
It's the same way as LocoScript uses to print a line in NLQ: it prints one line of draft-quality-like characters, moves the paper up almost imperceptibly, then prints another line of characters, each formed from a slightly different pattern to that already printed. The result is that each character comes out pretty smoothly.

To illustrate the process involved, imagine you want to be able to print out the astrological symbol for 'Mars', the biological symbol for 'male'.

The design will, like LocoScript's printed characters, come out as a 16x16 pattern. Draw it on squared paper as before, but note that because there are 16 not 8 vertical dots you

Head ache

I have a PCW8512 and 9512 but find that discs from the B drive of the 8512 are not accepted on the 9512: it refuses to read them, giving a 'disc mark missing' message, even though the discs can still be read on the 8512. It seems that the positions of the drive read heads are slightly different; is it possible to adjust them?

J Cherry, Kendal, Cumbria

8000 Plus: I don't know of a simple solution I'm afraid, apart from trying again and again. Can anyone help?

don't need to 'stretch' the design as was necessary with the note design above. It looks roughly the same shape as you'd expect:

The procedure is similar to that before, except that you split the design into the odd rows and the even rows:

You can then print out the two patterns almost on top but with the even rows displaced downwards in a similar way to that above:

```
10  odd$=CHR$(27) + "L" +
    CHR$(15) + CHR$(0)
20  even$=odd$
30  FOR j%=1 TO 15 : READ d% :
    odd$=odd$ + CHR$(d%) : NEXT
    j%
40  DATA 4, 10, 17, 17, 0, 0, 0, 17, 17,
    26, 4, 32, 0, 64, 112
50  FOR j%=1 TO 15 : READ d% :
    even$=even$ + CHR$(d%) : NEXT
    j%
60  DATA 12, 18, 0, 0, 33, 33, 33, 0, 0,
    146, 172, 128, 192, 128, 224
70  LPRINT odd$; CHR$(27) + "J" +
    CHR$(2) + CHR$(13); even$
```

Giving a smooth result when the program is run:

Mini Office and Protext users can use a similar process to insert graphics into their documents... but that's another story!

Swingeing cuts
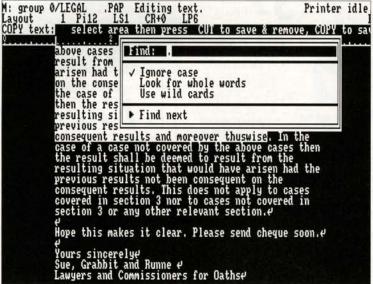
When you want to copy or cut an area of text in LocoScript, the PCW waits after you have pressed [COPY] or [CUT] for you to select the area.

Rather than use the cursors to select the area, press [FIND] then full stop then [ENTER]. The area up to the end of the current sentence is selected. To select up to the end of the next sentence, press [FIND] [ENTER]; to the next, [FIND] [ENTER] again; and so on until you have selected the required area. This is a quick way of selecting whole sentences.

If the area to be selected ends near an unusual character – $ for example – you can use [FIND] $ similarly to select areas quickly. If your document consists of a lot of sections that you want to shuffle around into order, it might be a good idea to "mark" them with $ signs to make cutting and pasting easier.

Niels Ege, Gentofte, Denmark

You don't have to rely on just the cursors when marking out an area to CUT or COPY in LocoScript; use the [FIND] facility as well to quicken things up

Code comfort for Protext users

Very often, when sending material on disc to typesetters which involves special effects or foreign accents, they want you to use certain codes: [ea] for é, for example, [ac] for â, or [bon] and [boff] for 'bold on' and 'bold off' commands. So, you'd write 'p[ac]t[ea]' instead of 'pâté' for example in a document to be typeset.

The problem with this is that it's difficult to remember what the codes are and it's even more difficult to read through for sense. So, type in your document as normal, typing 'pâté' wherever appropriate.

Then, when it's finished, create and save a new document called TYPESET.MKS on the same disc consisting of lines such as:

```
r
é
[ea]
ag
r
è
[eg]
ag
r
â
[ac]
ag
```

and so on. The 'r' means 'replace' in Protext and has the same effect as pressing [EXCH]. The 'ag' means Protext does the substitutions globally and automatically.

If you want to do something similar with printer codes, add lines like this to the file:

```
r
!b
[boff]
2ag
r
!b
[bon]
ag
```

and so on – similarly with !i for italic and !u for underline. Note how the '2' option makes sure Protext replaces only every second bold code it finds – i.e. the 'off' codes – with [boff], and the remaining codes – i.e. the 'on' codes – with [bon].

To convert your file to the version with the typesetter's marks, load it up and type **x typeset.mks** [RETURN]. Protext tells you how many of each it has replaced, so if the numbers of bold-on and bold-off are different you have a problem!

The converted file can then be saved and turned into an ASCII file using the BASIC conversion program that was given in November 1990's Tipoffs. Alternatively, you can try saving it under a very wide margin (so that each paragraph is then a single line).

Edwin Carpenter, Oxford

Pin high

```
B: group 0/CARDSAFE.F    Editing text.          Printer idle. Using  B:
Main      PiPS  LS1  CR+0  LPS  Bold                    Page   1 line 2
f1=Actions    f2=Layout    f3=Style    f4=Size    f5=Page    f7=Spell    f8=Options

(+Bold)(+Mail)w1="":w2="":w3="":w4="":t="  ":ret="
":L1="A":L2="B":L3="C":L4="D":L5="E":L6="F":L7="G":L8="H":L9="I":L10="J":
L11="K":L12="L":L13="M":L14="N":L15="O":L16="P":L17="Q":L18="R":L19="S":
L20="T":L21="U":L22="V":L23="W":L24="X":L25="Y":pi=3.141592654:

rand="(+Mail)!rnd=?; Enter time eg 1403
rnd=[rnd+pi]:rnd=[rnd*rnd*rnd*rnd]:rnd=[rnd-[rnd|0!]]:
x=[[rnd*10]|0!]:(-Mail)" (-Mail) (+Mail)

r="(+Mail)!PIN=?#; Please enter PIN (four digits)
!N1=[pin/1000|0!]:!v1=[n1*1000]:!N2=[[pin-v1]/100|0!]:!v2=[n2*100]:
!N3=[[pin-v1-v2]/10|0!]:!v3=[n3*10]:!N4=[pin-v1-v2-v3|0!]:
!WORD=?; Please enter memorable four letter word (no repeated letters or 'z')
n=[n+1]:sr="LET=L"&n:%sr:(-Mail)(+Mail)
LET:t:test="*"&LET&"*":#word=test:<:test=LET&"*":#word=test:<:line2=line2&N1:>
test="?"&LET&"*":#word=test:<:line2=line2&N2:>
test="*"&LET&"?":#word=test:<:line2=line2&N3:>
test="*"&LET:#word=test:<:line2=line2&N4:>
<:%rand(+Mail)(+Mail)
line2=line2&x:>:line2=line2&t:#[n/5]=[n/5|0!]:<:ret:line2:ret:line2="":>:
#n=25:<:n=0:>:(+Mail) (-Mail) (+Mail)

line2="":n=0:%r@n(-Mail)
```

The routine for producing that PIN table. Note the random number generator and routine that tests for key presses – both very important and useful for other programs

Here is a way of keeping your PIN code (Personal Identity Number) for use with a cash card in a secure manner. It works like this. Suppose your PIN is given to you as 8000, but you want to remember it by the four-letter keyword PLUS. You tell the program this and it will print out a table like the following

A	B	C	D	E
8	8	9	3	9
F	G	H	I	J
1	7	3	7	1
K	L	M	N	O
3	0	2	7	9
P	Q	R	S	T
8	5	7	0	8
U	V	W	X	Y
0	3	1	6	4

making the number associated with PLUS therefore '8000'. Carry the above table in your wallet, handbag or personal organiser and all you have to do to remember your PIN number is to remember the keyword and then consult the table. Even if someone steals your table, they won't be able to work out the number because they don't know the keyword and there are other dummy letters and numbers there to confuse them (and they will be different every time).

February's 8000 Plus had a way to generate a table like that above in BASIC. But here's a way to do it in LocoMail. The routine uses two important features.

1. Random numbers in LocoMail. The routine 'RAND' does this effectively, using the time to create the initial seed and then producing a sequence of 'random' numbers. (The same seed will always produce the same sequence).

2. How to handle keyboard input – here, the individual letters of the keyword – without a great deal of typing! The answer is a mild breakthrough for LOCOMAIL which enables all sorts of otherwise impossible procedures. The key to it lies in the LocoMail subroutine SR:
SR= "LET=L" &n : %SR : (-Mail) (+Mail) [RETURN]
which succesively translates as LET=L1, LET=L2, LET=L3 etc. In order to achieve this note that
1) This special sort of subroutine must be within another routine.
2) The subroutine is not contained within its own (+Mail) ....(-Mail)
3) The call '%sr:(-Mail) (+Mail) [RETURN] must be exactly in that form. The subroutine name must be followed by ':(+Mail) (-Mail) [RETURN]'
4) No inverted commas may appear within the subroutine (define all test variables outside the subroutine.)
5) Any variables which are to be inserted (such as the 'n' in the example must be added as if 'SR' was just an ordinary variable being defined.

The complete LocoMail Fill document is as follows:

```
(+Bold)(+Mail); CARDSAFE.F by John Eade
w1="":w2="":w3="":w4="":t=" [TAB]":ret="[RETURN]
":L1="A":L2="B":L3="C":L4="D":
L5="E":L6="F":L7="G":L8="H":
L9="I":L10="J":L11="K":L12="L":
L13="M":L14="N":L15="O":
L16="P":L17="Q":L18="R":
L19="S":L20="T":L21="U":
L22="V":L23="W":L24="X":
L25="Y":pi=3.141592654:

rand="(+Mail)!rnd=?; Enter time eg 1403
rnd=[rnd+pi]:rnd=[rnd*rnd*rnd* rnd]:rnd=[rnd-[rnd|0!]]:
x=[[rnd*10]|0!]:(-Mail)" (-Mail) (+Mail)

r="(+Mail)!PIN=?#; Please enter PIN (four digits)
!N1=[pin/1000|0!]:!v1=[n1*1000]:
!N2=[[pin-v1]/100|0!]:!v2=[n2*100]:
!N3=[[pin-v1-v2]/10|0!]:!v3=[n3*10]:
!N4=[pin-v1-v2-v3|0!]:
!WORD=?; Please enter memorable four letter word (no repeated letters or 'z')
n=[n+1]:sr="LET=L"&n:%sr:(-Mail) (+Mail) [RETURN]
LET:t:test="*"&LET&"*":#word= test:<:test=LET&"*":#word=test: <:line2=line2&N1:>
test="?"&LET&"*": #word=test:<:line2=line2&N2:>
test="*"&LET&"?":#word=test: <:line2=line2&N3:>
test="*"&LET:#word=test:<:line2= line2&N4:>
line2=line2&x:>:line2=line2&t:#[n/5] =[n/5|0!]:<:ret:line2:ret:line2="":>: #n=25:<:n=0:>:(-Mail)"(+Mail) (+Mail)

line2="":n=0:%r@n(-Mail)
```

Create a document called CARDSAFE.F (here .F denotes a 'Fill' LocoMail document). Set the tabs to every 3. Enter exactly as shown (errors can be difficult to trace). Select 'Finish edit'.

To use, just press 'F' for Fill in the disc manager with cursor over CARDSAFE.F, press [ENTER], and follow the on-screen instructions. The result should be a printed table as shown above.

If you wish to make several versions do not use 'Discard' otherwise the same number and keyword will be used. Go back to the disc manager and Fill again.

All that remains is for you to print out the result, cut it out and keep it safely in your wallet – and next time you forget your PIN – just hope that you haven't forgotten your special keyword as well!
John Eade, Fovant, Salisbury

List to the side

When I try to LLIST programs in BASIC on my 9512 printer, very long lines go right off the edge of the paper and print on the platen! How can I get them to go onto the next line?

Mrs M Smith, Salisbury, Wiltshire

8000 Plus: Easy. Before your first LIST command in BASIC, type the line lprint chr$(27) + "@" + chr$(27) + "1" + chr$(0) + chr$(27) + "Q" + chr$(80) [RETURN] and it will set the margins at 0 and 80, preventing overrun at the right hand side. You can substitute other values into the above line for 0 and 80 if you wish.

Protect and (let your listings) survive

Is there any way I can list or print out a program in BASIC that I accidentally protected by typing SAVE "PROG",P?
Audrey Roser, Doonfoot, Ayr

8000 Plus: On an 8256 or 8512 it's easy. (On a 9512 it's much more complex and this method won't work).
1. In BASIC, type **new [RETURN]**
2. Then type **save "empty.bas",a** [RETURN] thus effectively saving an empty file
3. Load the protected program with load "prog [RETURN].
4. Merge it with the empty file using **merge "empty [RETURN]**.
   You can now save the listing PROG.BAS, list it, list it etc. and it is now effectively unprotected again. So 'protected' files aren't all that safe!

THE GOOD Software FILE

These pages provide a guide to the best software around for the Amstrad PCW. Published in three monthly parts, this time it's the turn of Spreadsheets, Games and Graphics to face the 8000 Plus music. We've set out to test every piece of software we could lay our hands on, and to give you enough information to decide which program is the one you might be looking for.

All software will run on both the 9512 and 8000 series unless otherwise stated, though the 9512's daisywheel printer cannot print graphical output.

The selection isn't comprehensive, but the software listed here represents what we think is the best of that currently available.

As well as a brief summary of what they do, there are the main Plus and Minus points for each program - Pluses have a ▲ by them, Minuses a ▼. Games have appropriate marks out of 5. Have fun window shopping!

SPREADSHEETS

If a database replaces an address book, then a spreadsheet replaces the back of an old envelope. It is really an electronic piece of paper which allows you to jot down numbers, juggle them around and analyse the cost benefits of a situation. Vital for businesses, spreadsheets can be useful to home users too: if you want a bank loan you will find that showing your bank manager a spreadsheet printout of your living expenses answers a lot of questions!

A typical spreadsheet has a grid of rows and columns. This grid forms a screenful of cells identified by their column and row numbers, e.g. A3, K36 etc. Each cell can contain a simple number, some text to make the page easier to read, or a formula telling the spreadsheet to work out a number using values from elsewhere. The power of spreadsheets is in this last category, formulae. You can make a cell's value depend on the value of cells above it, or to the left of it, and this value is then automatically updated if changes are made to the other cells.

So how do you choose between the various spreadsheets? One difference is sheet size, i.e. the number of cells you are allowed to work with. You'll need a few hundred for home use, and 1000 or more for business use. Another area is the range of formulae that you can use – all spreadsheets allow simple column and row totalling, but with some you can get complex statistical analyses too. As with all software, think very carefully what you will need before choosing.

MINI OFFICE PROFESSIONAL

£39.95 • Database Software • 0625 859444

Mini Office is a suite of five integrated programs – database, word processor, graphics module, comms package, and a very good spreadsheet. Broadly similar to SuperCalc in operation with usual features of auto or manual recalculation, replicating of rows/columns, powerful range of arithmetic functions etc. Printout is a strong point – rows/columns can be put into italic/bold etc, and prints draft, NLQ or even sideways! Can't sort and can't just save data or structure of a spreadsheet, but maximum size of spreadsheet is claimed to be 320k. You can use the data from a spreadsheet in the graphics module directly. The manual is, however, pretty useless.

PLUSES • MINUSES
▲ Good, full-featured easy to use spreadsheet
▲ Prints in draft, NLQ or even sideways
▲ Maximum size of spreadsheet 320k
▲ Can transfer data directly to graphics module
▲ Can drive 24-pin printouts
▼ 'Save' options not as versatile as SuperCalc

CRACKER 2 TURBO PLUS

£49.00 • Paperback Software • 0245 265017   **POWERFUL**

A spreadsheet designed with advanced calculating power firmly in mind, including statistical functions. The screen layout is totally defined by the user, and cell value calculations can almost be full programs, e.g DO ... WHILE.

It might prove too complex if all you want is simple spreadsheet operations. The screen messages are very helpful though.

PLUSES • MINUSES
▲ Can cope with very complex formulae
▲ Flexible screen format defined by the user
▲ On-screen prompts are very clear
▲ Graphs/charts can be automatically produced
▼ Documentation is large, but obscure and confusing
▼ You've got to do a lot of work just to get started
▼ Very complex for quick, simple applications
▼ Needs some programming skills to get the most out of it
▼ Free workspace is on the small side (17k) although memory is used efficiently

SUPERCALC 2   **BEST GENERAL BUY**

£69.95 • Amsoft • 091 510 8787

The best selling spreadsheet, officially endorsed by Amstrad. SuperCalc 2 is broadly similar to ScratchPad Plus, but it has a smaller workspace and is less flexible about the allowed spreadsheet dimensions. You can store sequences of commands for repetitive calculations. Price includes VAT and p&p.

PLUSES • MINUSES
▲ Excellent manual – sections for beginners and experts.
▲ Stores commands to run from files
▲ "Data Interchanger" allows you to transfer spreadsheet data to other applications
▲ Comprehensive range of calculation functions available
▲ Screen can be split into 2 windows
▼ Spreadsheet is limited by memory size
▼ No graphical output facilities

FIRST CALC   **EASY TO USE**

£29.95 • Minerva System • 0392 437756

Touted as a quick and simple to use program for the beginner, this is nevertheless quite a powerful spreadsheet, with a large capacity, ability to replicate formulae, export etc. Really it's not vastly more user-friendly than the rest but a good value package all the same.

PLUSES • MINUSES
▲ A lot of program for the money
▲ Good tutorials with demo files
▲ Simple to use but reasonably sophisticated
▼ Not much easier to use than more powerful packages
▼ Program is limited by the memory capacity of the PCW (300 – 400 filled cells)

GRAPHICS

You can use a graphics package to create and store diagrams and drawings on disc, to be amended, adjusted or printed out at will.

There are three main types of graphics package: art, technical drawing and graph plotting programs. In art packages the emphasis is on designs and pictures, with freehand drawing facilities, a selection of pretty text fonts and a variety of patterns to fill areas with. These are made much more effective and easier to use if you have a mouse.

Technical drawing packages concentrate on shapes, such as squares and polygons, lines and labels. Finally graph plotters will take your data and turn them into bar charts, pie charts and so on. 9512 owners will have to buy a dot matrix printer to do all this, of course.

The other way to produce graphics on the PCW is to use a Desk Top Publishing package - more expensive, but with the facility to handle text, too. DTPs will be covered in next month's issue.

MASTER PACK

£79.95 • Database Software • 0625 859444

A combination package, comprising MasterScan (see below) and the old MasterPaint software. Masterpaint is a WIMP environment graphics package (Windows,icons, menus and pointer) which will run with Kempston, AMX or Electric Studio mice. Usual facilities for drawing curved or straight lines, polygons, boxes, circles and ellipses, and a host of 'fill' patterns. 'Undo' function and eraser facility, plus the ability to zoom in on a part of the picture.

PLUSES • MINUSES
- ▲ WIMP environment makes it easy to use
- ▲ Zoom function lets you fine-tune your pictures
- ▲ Good range of effects
- ▲ Undo and erase facilities
- ▼ Text fonts are boring
- ▼ Can't move large blocks with the copy function

MASTERSCAN
POWERFUL

£69.95 • Database Software •

0625 859444

A device which clips on to your printer head and scans pictures, sending the digitised result to disc. You can then use the pictures in desktop publications or in other graphics packages, such as Master Paint. Very useful for newsletter production but the claims for Master Scan as a low-cost fax machine are grandiose – the quality of scanned text is poor if the text is anything less than headline size.

PLUSES • MINUSES
- ▲ Simple method of getting good digitised graphics
- ▲ Suitable for all desktop publishing programs
- ▲ Contrast control useful
- ▼ Quality of scanned text is bad – no good for faxes
- ▼ Problems with illustrations containing lots of grey

GRAFLINK 2

£24.90 • Philosoft • 0282 870197

Opens up Masterscan possibilities to all DTP and graphics programs. Can also be used independently to scan in large areas of graphics, up to A4 size. Rather complex, perhaps, for the beginner, but ideal for the more serious DTP pundit.

PLUSES • MINUSES
- ▲ Gives Masterscan a new lease of life
- ▲ Excellent flexibility between speed and quality of scan
- ▲ For the experienced user it is both fast and efficient to use
- ▼ Documentation and menu system unhelpful
- ▼ Takes time and disc space

LIGHTNING BASIC + +

£29.95 • CP Software • 0993 823463

A very clever add-on to normal Basic which works on three levels. The first contains all the everyday commands, whilst the second and third levels are used for designing icons, characters and sprites. There is something in it for everyone, whether an experienced Basic programmer or a beginner.

PLUSES • MINUSES
- ▲ Simple and easy to use
- ▲ Makes simple Basic programs look really professional
- ▲ Good fun to use
- ▼ Documentation can be unclear
- ▼ Printed output is coarse draft quality
- ▼ Can only cope with simple graphics

COMPLEMENT FONTS & BORDERS

£12.50 • Dragonfly Designs • 0603 890195

Although it can be used with all the main DTP packages, this latest complement disc was designed to work alongside Stop Press. The 11 fonts supplied on the disc show consistent good design and artistic flair and are easily loaded.

PLUSES • MINUSES
- ▲ The fonts provide a very professional finish.
- ▲ It is possible to rotate and reverse elements.
- ▲ Very user-friendly.
- ▼ Setting up borders tends to be difficult and time-consuming.
- ▼ Printed output could be better (but it is still above average).

SIGNWRITER

£29.95 • Wight Scientific • 081 858 2699

Offers the widest range of features of any of the poster printing programs. Signwriter provides a range of 20 fonts, some of them very imaginative. Ideal for posters.

PLUSES •MINUSES
- ▲ You can redesign fonts and design your own symbols.
- ▲ A wide range of interesting fonts is available
- ▼ Not very user-friendly.
- ▼ Font design is slow.

TAS-SIGN

£29.95 • Tasman Software • 0532 438401

For those really big characters. Can cope with letters up to seven inches high, and down to an inch high, although at the smaller sizes the quality is not great. A wide range of options are avaiable - reversed, underlined, bold, centred, various spacings, patternings, borders and so on. Landscape printing supported.

PLUSES •MINUSES
- ▲ Good quality print out
- ▲ Four fonts available, all appropriate for large scale work
- ▲ Wide range of choices - but with simple basic operations
- ▼ Smaller letters not printed so clearly
- ▼ Can take a long time to print out in absolute top quality

AYE PLUS PLUS

£29.95 • CP Software • 0993 823463

The full title is 'All you ever wanted to know about graphics, the universe and everything on PCW 8256/8512 ... but were afraid to ask PLUS' Phew. A wide range of little programs to do graphic things on the PCW like smooth scrolling, defining windows, moving sprites around. The programs are written in assembler, with the source code provided if you want to see how to program them for yourself and adapt the routines.

PLUSES • MINUSES
- ▲ Wide range of useful functions
- ▲ Can be used from BASIC, machine code, or other language
- ▲ The assembler source code is supplied
- ▲ Inexpensive
- ▲ Good manual
- ▲ CP don't mind you using their routines in programs you sell
- ▼ A bit long-winded to use from BASIC
- ▼ No easy way of loading just the routines you want

PAGE MAGIC, DISC IMAGE KIT, DISC POSTER KIT

£12.50 each • HD Design • 04867 81394

Clip art collection with a difference. This suite of three ready - made design aids offers a wide range of additions to your text. Page Magic contains a series of sporting images and digitised male and female shots, together with a handy selection of frames and borders. Image Kit has a range of images, from Spitfires to Buddha, whilst Poster Kit offers an excellent collection of print styles, which reproduce with astounding clarity.

PLUSES
- ▲ Poster Kit contains ready made words such as 'Fete' and 'Sale'
- ▲ Excellent visual clarity

SKETCHPAD II

£15.95 • Composit Software • 0952 595436

A nice little package for those who only need a simple graphics capability. Line, circle and box facilities are all supported, but curved lines are tricky. Smaller shapes and icons can be produced using the shape designer, and the final product can be tidied up using the zoom facility. Will be of interest to musicians who use the Composers Pen package - the two are easily compatible.

PLUSES • MINUSES
- ▲ Ideal for the novice
- ▲ Can be used with or without mouse
- ▲ Includes useful zoom facility
- ▲ Integrates with Composer's Pen to neaten up copy
- ▼ Limited range of paper sizes

- ▼ Execution of some functions can be very time consuming

PCWDRAW

£39.95 • HTB Computers Ltd • 0794 56297

A good all round graphics package. All the usual facilities available, with the bonus that it now supports the Kempston mouse, turning a good package into a powerful one.

PLUSES • MINUSES
- ▲ Zoom functions for close work
- ▲ Detail editing included
- ▲ Large working screen means you see things in context
- ▼ Mouse could be more fully implemented
- ▼ Documentation rather scatty

VIDI PCW

£79.95 • Rombo Productions • 0506 414631

A very similar package to the Electric Studio digitiser; not much to choose between the two. Rombo's works with the Fleet Street Editor, Electric Studio's with Newsdesk International.

PLUSES • MINUSES
- ▲ Text can be inserted from within the program
- ▲ 16 levels of shading
- ▲ Can print images to screen in defined order and time apart.
- ▼ Unhelpful manual

MD CLEARTEXT

£13.50 • Exemplar Design • 0225 315131

Designed for use in conjunction with MicroDesign , MD Cleartext allows you to create your own type styles to liven up your work. There is a range of non-English fonts on offer as well, including the accents in the French, German and Spanish languages. An excellent add-on to an excellent DTP program.

PLUSES
- ▲ Developed in conjunction with Creative Technology themselves, resulting in a comprehensive appreciation of MicroDesign's workings.
- ▲ No jagged edges or loss of definition when large characters are printed out
- ▲ Produced from a quality and highly reputed source

GAMES

The choice of games for the PCW is far from extensive in comparison with what is on offer for other machines. However, the range is widening, and there is an increase in graphics-based games, replacing the text-only adventures which currently dominate the market for the PCW. Text-based games rely heavily on the use of parsers, which aid adventure navigation by word analysis. The ability of a parser, is, not surprisingly, responsible for the success or failure of a game. What follows is a selection of some of the best games currently available for the PCW, together with a marks out of five evaluation.

Some pieces of software which have graced these pages for years are now discontinued - but a diligent search may find copies residing with software distributors and retailers.

AVON

£14.95 • Topologika • 0733 244682 • All PCWs

Based on the world and work of Shakespeare, this text-only adventure puts many a puzzler to even the most well-versed student of the bard. A handy help mode will get you out of the

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tighter corners. Compulsive gameplay!

ADDICTIVENESS	4/5	ATMOSPHERE	4/5
CHALLENGE	4/5	VALUE VERDICT	4/5

BRIAN CLOUGH'S FORTUNES
£14.99 • CDS • 0302 321134 • All PCWs

A cross between Monopoly and Football Manager, combining board and PCW. Go for league and cup success – but keep the bank manager happy too!

GRAPHICS	2/5	ADDICTIVENESS	4/5
LASTING APPEAL	4/5	VALUE VERDICT	4/5

BRIDGE PLAYER GALACTICA 2150
£29.95 • CP Software • 0993 823463 • All PCWs

The upgraded Bridge Player 2000. Excellent Tutor mode with hands written by Nichiola Gardener of the London Bridge School. Retains strong play.

GRAPHICS	3/5	STRENGTH OF PLAY	4/5
LASTING APPEAL	4/5	VALUE VERDICT	3/5

CLASSIC GAMES 4
£19.95 • CP Software • 0993 823463 • All PCWs

A compilation of classic 'thinking' games on one disc: Clock Chess, Bridge Player, Backgammon and Draughts. Excellent value for money.

CLOCK CHESS 89
£19.95 • CP Software • 0993 823463 • All PCWs

One of the better PCW chess programs. You can alter the level of play by specifying a time limit. Capable of very strong play and the 3D graphics are excellent.

GRAPHICS	4/5	STRENGTH OF PLAY	5/5
RANGE OF FEATURES	5/5	VALUE VERDICT	5/5

COLOSSUS BRIDGE 4.0
£17.99 • CDS Software • 0302 321134 • All PCWs

Sophisticated and flexible bridge program. It will give you advice for each hand, supports all the standard conventions, and gives you considerable freedom in setting up the hands. Relive those glory moments, rebid those failures!

RANGE OF FEATURES	5/5	CHALLENGE	4/5
DOCUMENTATION	4/5	VALUE VERDICT	5/5

COLOSSUS CHESS 4.0
£17.99 • CDS Software • 0302 321134 • All PCWs

A very strong chess game which manages to use time which you spend thinking to plan its strategy. Bags of features, including blindfold games.

GRAPHICS	3/5	STRENGTH OF PLAY	3/5
LASTING APPEAL	4/5	VALUE VERDICT	3/5

CROSSGRID
£14.95 • David Grenhough Computing •
0274 636475 • All PCWs

"Crossword puzzles without clues" is how the packaging describes the program. Instead of the clues, you get a grid of numbers, each standing for a different letter. Can you work out which stands for which?

EASE OF USE	5/5	ADDICTIVENESS	5/5
DOCUMENTATION	4/5	VALUE VERDICT	5/5

CYRUS II CHESS
£15.95 • Amsoft • 0279 454555 • All PCWs

Chess game with a stunningly detailed 3-D display. The play is quite strong, with several handy features like allowing you to take back a move.

GRAPHICS	5/5	STRENGTH OF PLAY	3/5
LASTING APPEAL	4/5	VALUE VERDICT	4/5

DOUBLE T PATIENCE
£14.95 • Thurston Techniques • 0395 277496 • All PCWs

Six well-known card games (from Poker Patience to Pairs) to be played either alone or against the computer.

GRAPHICS	2/5	ADDICTIVENESS	5/5
LASTING APPEAL	4/5	VALUE VERDICT	3/5

FORESTLAND
£14.95 • Classic Quests/Audiogenic • 081 861 1166

You're in a forest and you're not sure how you got there, whether you are asleep or awake, and how the devil to get out. You need your wits about you in this game to puzzle your way out of the wicked wood.

CHALLENGE	3/5	ADDICTIVENESS	4/5
ATMOSPHERE	3/5	VALUE VERDICT	3/5

GNOME RANGER
£14.95 • Level 9 • 0344 487597 • All PCWs

You follow the adventures of Ingrid Bottomlow, the intrepid gnome, through a fairy tale landscape full of compelling puzzles. Humorous and rather quaint.

ATMOSPHERE	3/5	INTERACTION	3/5
CHALLENGE	3/5	VALUE VERDICT	4/5

GOBLIN TOWERS
£14.95 • Classic Quests/Audiogenic • 081 861 1166

A game for beginners to adventuring, Goblin Towers sees you as a brave warrior , seeking to retrieve treasure from a goblin-ridden castle.

ATMOSPHERE	3/5	ADDICTIVENESS	3/5
CHALLENGE	3/5	VALUE VERDICT	9/15

GRAND SLAM
£14.95 (plus £1.50 p&p) • Logi'stick •
0223 423456 • All PCWs

A challenging and realisticversion of lawn tennis, calling for good manual dexterity and tactics. Choice of five venues including Wimbledon. Only drawbacks are the poor racket control and the irritating ball boys, who slow the game down.

RANGE OF FEATURES	4/5	CHALLENGE	5/5
INTERACTIVENESS	3/5	VALUE VERDICT	4/5

GREEN
£12.00 • Classic Software • n/a • All PCWs

Race against the Global Warming in this new eco-drama game set in forestland threatened by over zealous lumberjacks. Preserve your morality points, perfect your strategy, and you might save the trees from destruction.

ATMOSPHERE	4/5	CHALLENGE	3/5
GAMEPLAY	4/5	VALUE VERDICT	4/5

HEAD COACH
£22.95 • DGA/Coda • 061 330 0184 • All PCWs

You coach an American Football team, picking players and deciding tactics against real NFL teams and players. Incredibly detailed simulation – a must for NFL fans!

ATMOSPHERE	4/5	INTERACTION	5/5
CHALLENGE	4/5	VALUE VERDICT	4/5

HOME ENTERTAINMENT CENTRE
£19.99 • CDS • 0302 321134 • All PCWs

Five-in-one games compilation, featuring darts, backgammon, dominoes, cards and a wordsearch game. Excellent graphics, original ideas andf presentation – darts has never yet been available as a game for the PCW.

EASE OF USE	5/5	ADDICTIVENESS	4/5
FEATURES	5/5	VALUE VERDICT	4/5

INGRID'S BACK
£19.95 • Level 9 • 0344 487597 • All PCWs

Sequel to Gnome Ranger in which Ingrid returns to Little Moaning to find it under threat from Jasper Quickbuck who wants to replace it with a yuppie estate. Adventure in 3 parts.

ATMOSPHERE	4/5	INTERACTION	4/5
CHALLENGE	5/5	VALUE VERDICT	4/5

KNIGHTORC
£19.95 • Level 9 • 0934 814450 • All PCWs

You are an orc in this typical Level 9 adventure by the name of Gridleguts. An addictive game with lots of action, plenty to explore and mind-bending puzzles.

ATMOSPHERE	4/5	INTERACTION	4/5
CHALLENGE	4/5	VALUE VERDICT	4/5

LANCELOT
£19.95 • Mandarin • 0625 859444 • All PCWs

A game in three parts which recounts the adventures of Lancelot.. Manufacturers have vividly created an Arthurian world in which points are awarded for displays of chivalry, valour or benevolence. The game permits a full range of powerful commands.

ATMOSPHERE	5/5	INTERACTION	5/5
CHALLENGE	4/5	VALUE VERDICT	5/5

MYTH
£22 (membership) • Magnetic Scrolls
0279 726585 • All PCWs

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adventure game, where you find yourself cast as Poseidon – minus his godly powers! Rescue your fate from the lap of the gods.

ADDICTIVENESS	4/5	ATMOSPHERE	4/5
CHALLENGE	4/5	VALUE VERDICT	5/5

PATTERN PUZZLES

£11.50 • HTB Computers Ltd • 0506 414631 • All PCWs

A collection of intriguing puzzles requiring you to return order to a grid of patterned squares. Similar to the tile games found in Christmas crackers, except that here there is no blank space to help you shuffle things around - instead the rows and columns wrap round in various different ways. Mind bending!

EASE OF USE	3/5	DOCUMENTATION	2/5
RANGE OF FEATURES	4/5	VALUE VERDICT	3/5

RETURN TO DOOM

£14.95 • Topologika • 0733 244682 • All PCWs

Sequel to Countdown to Doom; you're back on the planet Doomawangera again to track down the ambassador Regina who has been kidnapped by some very unpleasant robots. Another text-only adventure game.

ATMOSPHERE	3/5	INTERACTION	2/5
CHALLENGE	4/5	VALUE VERDICT	4/5

SCAPEGHOST

£19.95 • Level 9 • 0934 814450 • All PCWs

You're a ghost with a mission – to catch the crooks who framed you on earth. You tramp your way through spooky cemeteries – solve the puzzles and brave the vivid graphics, and justice will be done.

ATMOSPHERE	4/5	CHALLENGE	4/5
GRAPHICS	5/5	VALUE VERDICT	4/5

SIR PERCEVAL

£14.95 • Logi'stick • 0223 423456 • 8000s only

An action game from the court of King Arthur. Fight the nasties in the castle, pick up the treasure, and make your way to the next level. Good medieval fun with pretty good graphics to boot.

EASE OF USE	4/5	RANGE OF FEATURES	4/5
CHALLENGE	3/5	VALUE VERDICT	4/5

SPORTING TRIANGLES

£19.99 • CDS • 0302 321134 • All PCWs

A computer implementation of the TV quiz show. Includes general, Hit for Six and Buzzer rounds, and choice of specialist areas. Amusing graphics, but some of the questions are quite difficult for the average sports fan, to say the least. Up to three players.

EASE OF USE	4/5	CHALLENGE	4/5
PRESENTATION	3/5	VALUE VERDICT	3/5

STEVE DAVIS SNOOKER

£17.99 • CDS • 0302 321134 • All PCWs

Surprisingly realistic simulation of both pool and snooker games – not as easy as it looks either! Foul shots, breaks and allows for spin, side, strength of shot. Good value, despite all the balls being greens!

GRAPHICS	2/5	ADDICTIVENESS	3/5

LASTING APPEAL	3/5	VALUE VERDICT	3/5

TANK ATTACK

£19.99 • CDS • 0302 321134 • All PCWs

A strategy game for the PCW. A combination of imaginative computer graphics and old-styl board game, complete with plastic tanks. Even includes on screen news bulletins! For up to four players.

EASE OF USE	4/5	FEATURES	5/5
CHALLENGE	4/5	VALUE VERDICT	4/5

TIME AND MAGIK

£14.95 • Mandarin Software • 0625 859444 • All PCWs

An excellent trilogy of time travel adventure which can be played in any order. Your task is to protect the history of the world from the destructive timelords –another very atmospheric game.

ATMOSPHERE	5/5	INTERACTION	4/5
CHALLENGE	5/5	VALUE VERDICT	5/5

TIMES CROSSWORDS - Volume 4

£19.95 • Akom Ltd • 081 852 4575 • All PCWs

Yes - the Times crossword for the PCW. No trouble about the basic material, of course - but there are a few eccentricities in the implementation. Most can be ignored, but the fact that you can only have one clue on display at a time can take some getting used to.

CHALLENGE	4/5	EASE OF USE	4/5
DOCUMENTATION	4/5	VALUE VERDICT	4/5

TERRACOM

£14.95 • logi'stick UK • 0223 423456 • All PCWs

An excellent intergalactic struggle between you, and the evil emperor Kashodex. You have to destroy his sky fortress in what can best be described as a game of cosmic squash! Regular tussles with Kashodex's space module leave you fighting for life!

ATMOSPHERE	5/5	ADDICTIVENESS	4/5
CHALLENGE	4/5	VALUE VERDICT	5/5

TOMAHAWK

£19.95 • Digital Int. • 0276 684959 • All PCWs

A sophisticated Apache helicopter flight simulator. Impressive cockpit view graphics as you engage in combat missions – can be used with a joystick too.

GRAPHICS	4/5	ADDICTIVENESS	3/5
LASTING APPEAL	4/5	VALUE VERDICT	4/5

UK TRIVIA TREASURE HUNT

£24.95 • IMC Software • 0604 54814 • All PCWs

Pit your wits against the program in this carefully planned game. The quest for success is tricky ; correct answers take you to various locations nationwide.

ATMOSPHERE	3/5	GRAPHICS	/5
CHALLENGE	3/5	INTERACTION	2/5

ULTIMATE QUIZ

£14.95 • DGC Software • 0337 7444 • All PCWs

Ten quizzes on topics as diverse as the Highway Code and the

Italian language. Clean screens and an easy to use program make Ultimate Quiz excellent entertainment and good value for money too.

GRAPHICS	5/5	CHALLENGE	4/5
LASTING APPEAL	3/5	VALUE VERDICT	5/5

WITCH HUNT

£11.50 • Classic Quests/Audiogenic • 081 861 1166

In Witch Hunt, you have been changed from an evil scheming rotter into a positively charming person – and you are not at all happy about it.To be returned to your former state, you have to gather the ingredients to give to the warty witch who can convert you back.

ATMOSPHERE	3/5	ADDICTIVENESS	3\5
CHALLENGE	4/5	VALUE VERDICT	10/15

WORLD OF SOCCER

£22.95 • DGA/Coda • 061 330 0184 • All PCWs

A soccer management simulation game; you select squads of players for your international team and guide them through the European and World Cups. Gives a good insight into the kind of strategic thinking required.

ATMOSPHERE	4/5	INTERACTION	3/5
CHALLENGE	4/5	VALUE VERDICT	4/5

YES CHANCELLOR
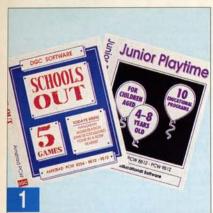
£19.95 • Topologika • 0733 244682 • All PCWs

Become John Major for a day with this intense game/challenge written in BASIC. Whether it's budget balance or inflation control at stake, the Unions and the voters still have to be kept happy.
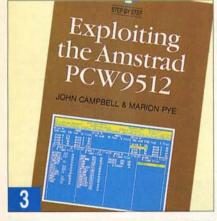
ATMOSPHERE	3\5	INTERACTION	3/5
CHALLENGE	4/5	VALUE VERDICT	4/5

1

SCHOOLS OUT/ JUNIOR PLAYTIME

Two games from DGC Software . Schools Out comprises Hangman, Wordsearch, Junior Crossgrid, Four in a Row and Reversi for the 7-14 year old. Junior Playtime has 10 fun games for the 4-8 year old.
8000+Value Verdict   17/20
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Jr.Playtime £10.99   Order No.8620

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EXPLOITING THE AMSTRAD PCW 9512

Written by John Campbell and Marion Pye, this book is aimed at the more experienced user of the 9512. 300 pages, packed with information on programs from Locoscript to Supercalc.2. Highly recommended by the 8000 PLUS team.
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JOHN CAMPBELL & MARION PYE

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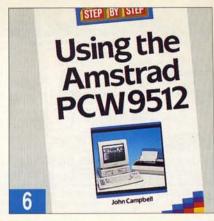
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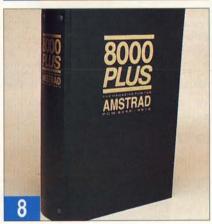
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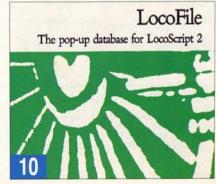
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Postscript

It's Postscript, the pages where you can really air your views!
This month's missives bring solutions to stardom, requests about repairs,
frustration with formatting and much, much more! And, surprisingly, there's not
one April Fool in sight... If you want to make sure that your opinion counts,
drop us a line; the address is Postscript, 8000 Plus, 30 Monmouth Street, Bath,
BA1 2BW. Sorry, but we can't answer correspondence personally.

Stardom!

There may be a simpler solution to Mr Dorey's rows of stars in his Cracker spreadsheet than the one you suggested in March's Postscript. It could be that he has not set the column wide enough for the totals to fit in, in which case Cracker will display stars to show there is insufficient room. If so, all he would need to do would be to put the cursor over the column, type N(ew) W(idth of column) and a figure which could accommodate the largest total he is likely to get.

Finally, a cautionary note. Before buying Masterscan bundled with Masterpaint I phoned the supplier to ask whether these would run with the SCA Rampac fitted and was assured there would be no problem. Masterpaint doesn't, as I have since confirmed with Database Software. Fortunately, there are alternative programs to use with Masterscan but I could have been in real difficulty. Moral - check with the software house if in doubt.
J V Knight
Ilford, Essex

8000 Plus: Thanks for your letter, JV; you were not the only one to offer an alternative solution to Mr Dorey's star problem. On the second point, I am pleased to hear that Database Software were so helpful; unfortunately, trying to obtain such help from other software houses can be like getting blood out of the proverbial stone.

Still, your experience is, it seems, a lesson to them all...

In a fix

I own an Amstrad PCW 8512. Could you please tell me where I could get my computer insured for any repairs as my one year guarantee will soon be finished in April '91. Can you get on site insurance?
G Pidgley
Walton-on-Thames, Surrey

8000 Plus: A company by the name of Dictaphone Ltd offer the kind of 'insurance policy' which you are seeking, in the form of a maintenance contract. They are, if you like, the AA or the RAC of the computer world; you pay them an annual membership fee, and in return, they will carry out any repairs to your PCW, in the comfort of its own home. For details of prices, and how to contact Dictaphone, turn to our special repairs feature on page 57 of this month's issue!

Identical things

With reference to the letter "All change" in the March 1991 issue of 8000 Plus, all three versions of the PCW8256/8512 are electronically identical as far as I can tell. I have a Version C printer, and a copy of the service manual which features the original version of the printer.

These are two obvious changes that have occurred to the printer during the lifetime of the PCW; the plastic rollers on the bail bar of the later printers have changed in shape; also, the design of the print has changed radically, although this would not affect the electrical characteristics of the printer where it plugs into the PCW. These changes would appear to be responsible for the Versions 2 and 3.

On the subject of printers, and of Amstrad's attitude to their customers, my print head failed last December, and I have only just managed to get a replacement. Printheads do seem to be in very short supply, which is ridiculous! It's the old cliche; nice machine - shame about the service!.
Mr S Pearson
Chipping Norton, Oxon.

8000 Plus: Thanks for the confirmation, Mr Pearson; it is not always very clear what is and isn't interchangeable as far as PCW kit goes. Sorry to hear about the delays in obtaining a replacement printhead - next month's issue will feature a fully illustrated guide to PCW 8000 series printhead maintenance.

Sorry to say that in your case, it's rather a case of shutting the stable door after the horse has bolted, but the feature could stand you - and others - in good stead for future breakdowns!

Say it again

I enjoyed David Langford's article on the perils and joys of indexing the latest - March - issue of 8000 Plus.
It is not, however, a trifle specious of him, to "plug" Ansible, from his own company? There are other indexing programs available for the 8512 and 9512 PCWs, including of course LocoFile and Cardbox.

Best of all, at least in my experience, is Macrex. Drusilla and Hilary Calvert first developed this for CP/M machines in the mid-Sixties, went on to MS/DOS Apricot and IBM compatible versions, but mid-term produced PCW variations.

When I think of the cost and effort involved in indexing on five-by-three cards since 1955, I could weep for my own lost revenue and energies. But that's progress for you...
A Morley-Priestman
North Chingford, London

8000 Plus: Dave Langford, specious? Whatever next!! We have to humour him from time to time, and, having been with us since the early days, he is allowed to get away with the odd plug-ette. Of course, the other programs you mention are equally legitimate - though we can't say we've come across Macrex!

Fair's fair

While Nik Holmes is of course right to point out that Micro Design 2 will accept pictures from MasterScan without Graflink2, he is not however right in saying that "The only advantage of Graflink is...to scan a longer image". The restriction with MasterScan standing alone is not just one of length but also of width, except at very low resolution. The main purpose of ➤

Graflink2 is to make it possible to scan right across the page at medium and high resolution.

This is demonstrated by Alec Rae's article "In the Picture". Although it is not acknowledged, the Acne Pumps picture was scanned using Graflink 2. This is proved by the second illustration, where a file is loaded called PUMP2.MDA. MasterScan cannot produce MDA files without Graflink2.

To produce the same result with MasterScan alone would have taken hours (and pages) longer as he would have had to piece together at least 4 separate files using cut-and-paste utilities in Micro Design 2. Graflink2 makes this laborious and time-consuming process unnecessary.

T M Richens
Philosoft
Colne, Lancs

8000 Plus: Thanks alot for your letter, Mr Richens. This topic is now closed.

At your service

Could you possibly tell me where I can obtain a Service Manual for the Amstrad PCW9512. Isenstein used to stock these, but no longer do so! I feel I am going to need a manual, since I have intentions to carry out a lot of internal modifications to the computer.

S J Lockley
Tavistock, Devon

8000 Plus: The manual which you refer to can be obtained by contacting good ol' Amstrad themselves on (0277) 230222, or try the Official Amstrad User Group on (091) 510 8787.

All fail!

I have had a PCW 8512 for some 6 months and have consistently had difficulty formatting discs in the B drive. About 50% fail to format and as a consequence I don't use the B drive very much.

However, having now just purchased LocoScript 2 with LocoSpell, I need always to employ it and have wondered if in fact there is some fault with the drive itself rather than the actual discs.

Your advice would be appreciated.

E C Cole
Peterborough

8000 Plus: Hmm, it does sound rather ominous, doesn't it? As long as you are following the formatting procedure, Disckit, from CP/M correctly, there doesn't seem to be a clear cut reason why your discs are failing. Disckit does lay down very strict instructions for formatting, and its pretty hard to go wrong. Could be time to put your machine in for a 10,000 mile service, Mr Cole. Check page 57 of this issue for your nearest repair centre.

Wordly wise

Your correspondent Roy Smith (Jan 91) points out that the PCW's LocoSpell contains the "useful" OUABAIN. If your readers do not know what this word means they will be really delighted to know that this glucoside $C_{31} H_{48} O_{12}$, closely resembles STROPHANTHIN - which is also in LocoSpell.

Rev R W Clements
Gorey, Jersey

8000 Plus: It's also in the 8000 Plus coffee machine, I fear.

IT

What is it, where is it, when will it come or has it come? What ever happened to the "major new product for the PCW" the Locomotive Software Managing Director, Howard Fisher, said was being worked on, June's 8000 Plus. Every month when I hear the clunk of 8000 Plus coming through my letter box, I rush to see if "IT" has appeared and if it has, could "IT" possibly be the longed-for LocoSpread. Will patience be rewarded or has "it" actually appeared and was it so insignificant that I did not even notice its coming.

Perhaps it was the Printer Support Pack that I am already using and did not think of in terms of a "major new product". Will I survive the suspense or will "IT" come too late?

David Hortop
Newport, Isle of Wight

8000 Plus: IT certainly isn't the Printer Support Pack; but judging by the silence in which Dorking has been shrouded for the past ten months, IT is nearly ready. We bring you more - next month...

The right Teqniche

I felt that I had to write to you to sing the praises of Cirtech, Teqniche and PRM Communications.

The Managing Directors of all three companies were very helpful in their support when purchasing their products, How refreshingly different it is in this day and age to meet people who are concerned in providing the best service to their customers; not just in taking the money! In addition, I must say how delighted I am that in having taken steps to upgrade my PCW 8512 both in speed and quality, at what has proved to be a price when in both cases was not exorbitant, I now have a computer which ranks with others supposedly better by design - if one believes all the opposition literature!

I now look forward to many more years of successful computing on my trusty Amstrad.

Gerry Brown
Weston-super-Mare, Avon

8000 Plus: The companies which you

mention have excellent reputations on all counts, Gerry - probably because they manufacture excellent products, and they are totally committed to championing the cause of a jolly fine computer. I'm glad to hear that you are pleased with the 'extras' in which you have so confidently invested - and hope that you'll have 8000 Plus as an equally trusty companion in those future years.

Saving grace

While much tempted by your generous offer of 25p off each copy of your magazine I have also to consider the health of the sweetshop-cum-newsagent in my small village in Kent. Reluctantly, therefore, (I am of Scottish extraction) I have come down in favour of the local shop. There, I assure you, I have a permanent order for your excellent magazine, which up till now, has never let me down.

As a user of both Loco 2 and Protext, I am particularly glad to have articles and tips on both systems. Your present article on headers and footers in Protext is a good example of this service. Your articles on new hardware and software are invaluable.

I discovered Proscan through your columns and the article on Cirtech's Sprinter I found very interesting and well balanced.

I will refrain from complaining too strongly about the space devoted to all those ghastly games. As my grandchildren grow up, I suspect they will want to have a go at them on my trusty Amstrad 8512 and might even persuade me to have a go myself.

J C Collier
Beneden, Kent

8000 Plus: Of course, a subscription is the best way to ensure that you are never deprived of 8000 Plus, but the course of action which you describe has its advantages as well. Other readers may be interested to hear that you can go into any newsagents' - from Land's End to John O' Groats - and place a regular order for 8000 Plus. And just to make it even easier, we've a special form for that very purpose on page 77 of this issue. At least that will prevent the ghastliest game of them all; jostling for position at the 8000 Plus shelf in your local shop every month, trying to secure a copy of the magazine before it sells out...Thanks very much for your letter, Mr Collier.

Pest control

I was particularly touched by Jane Cheasley's sad letter about her mouse. Some little while ago, I came upon the following notice from what must surely be a major computer manufacturer.
"MOUSE BALLS ARE NOW AVAILABLE AS FRU"
"If a mouse fails to operate, or should perform erratically, it may be in need ➤

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of Ball replacement. Because of the delicate nature of this procedure, replacement of mouse balls should be attempted by trained personnel only.

"Before ordering, determine type of mouse balls required by examining the underside of each mouse. Domestic balls will be larger and harder than foreign balls. Ball removal procedure differ depending upon manufacturer of the mouse. Foreign balls can be replaced using the pop-off method, and domestic balls replaced using the twist-off method. Mouse balls are not usually static sensitive, however, excessive handling can result in sudden discharge. Upon completion of ball replacement, the mouse may be used immediately. It is recommended that each servicer have a pair of balls for maintaining optimum customer satisfaction, and that any customer missing his balls should suspect local personnel of removing necessary functional items."

I am sorry I cannot provide any further informations as to the source of such an authorative notice.
Michael F Harris
Felpham, Bognor Regis

8000 Plus: I think it's probably better that way, Michael...

Self catering

I am delighted at having made the change from a PCW to a PC, using LocoScript PC on an Olivetti 286. My only disappointment is that "8000 Plus" no longer seems entirely appropriate and PC magazines like "PC Plus" do not appear to write on LocoScript to any degree.

Have you plans to include articles of interest for the likes of myself in 8000 Plus, or can you offer any alternative suggestions?
Donald H Clark
Wanstead, London

8000 Plus: The seeming lack of information which you have encountered is, admittedly, frustrating. Excellent though it is, LocoScript PC competes among a far larger crowd for prominence as a word processor than its PCW equivalent does, and consequently, doesn't command regular editorial attention, even in 8000 Plus' sister magazine, PC Plus. We have given this matter some considerable thought, and will be happy to incorporate Loco PC queries into our regular LocoPlus section. So, if any of you are using the program at home or at work, and have problems, drop us a line; we'd like to be of help. After all, LocoScript owners, of whatever format, are still speaking the same language; it's just that our accents now vary.

Internal affairs

The detailed instructions published under the heading "Carbon Copy" on pages 26 and 27 in the March issue of 8000 Plus are extremely clear, and I would like to thank you for informing your readers about our product.

However, when some people come to follow those instructions and open their cassettes, they may be surprised to discover that the internal mechanism is unlike those illustrated. So far we have identified about six different designs of mechanisms inside various makes of PCW9512 cassette, ranging from the extremely elegant and simple one illustrated, to a highly complex arrangement of springs, wheels, sprockets, guide-posts and rollers which are a nightmare to deal with.

In order to overcome this difficulty, we have assembled a Starter Pack comprising two cassettes of the type you have illustrated, plus four refills and, of course, instructions. This pack is priced at £10.99 inclusive, which is equivalent to six ribbons at £1.83 each.

As far as our mail-order refurbishing service is concerned, we are happy to accept any make of cassette. If this turns out to be one of the extremely complex ones, we may simply substitute one of our own cassettes instead of replacing the carbon in the original. The price for this refill service is £2 each plus 99p per order, fully inclusive.
Nick Godwin, Aladdink,
Berwickshire, Scotland

8000 Plus: Thanks for the info, Nick.

Cautionary tales

Andy Stillman's letter in Postscript, March issue, pointing out the possible loss of disc data due to weakening magnetic field and your reply suggesting re-copying discs every four months to prevent this, must have filled many of your readers with horror.

You obtained your recommendation from Dave Smith (The Disc Doctor) and while accepting fully his authority on this matter you would be doing your readers a valuable service if you obtained from both disc manufacturers and software houses, such as Locomotive Software, their considered opinion on shelf life of data on discs, assuming reasonable storage conditions, and passed this information on to your readers. As a matter of interest I have some 80 3" disks up to over five years old. Panicking as a result of this letter I checked at random number of discs which had not been copied for over five years, including the original LocoScript disc I obtained with my PCW 8256. To my great relief all were still readable/copiable.

Have I just been lucky, or is your recommendation to re-copy every four months over cautious?
John K Glascodine
Lennoxtown, Glasgow

8000 Plus: While we have been known to be a little bit reckless at times, we do

strongly believe in the motto, "Better to be safe than sorry." One or two of you were similarly alarmed by the recommendation we made, but there's really no need to panic; we were simply drawing attention to the fact that a disc cannot be expected to last forever, and that measures should be taken to protect and extend the life of the data which they contain. Yes, Dave Smith did make the recommendation; and we can't help feeling that, coming from someone who is involved in data recovery on a daily basis, we all should sit up and take a little bit of notice. Forewarned is, as they say, forearmed!

Classic account

I wrote to you last December to tell you about the problem I have recently been having in transferring files from my PCW 9512 to a recently acquired Apple Macintosh Classic.

The reason for the Apple Mac is that most of the outlets for my articles and also my publisher in the USA requires, if possible, that material submitted to them on Apple Mac discs for easy transfer to their printers. The greater part of my files are on PCW discs which they cannot handle (some haven't ever heard of the PCW). I had a 3.5 inch drive fitted to the 9512 by Moonstone of Clydebank (they also fitted a 5.25 inch drive to the 8512 to increase my flexibility) and attempts were made to transfer files via the 3.5 external drive. They failed, and attempts to solve the problem also failed. Then I approached the Apple Centre in Glasgow, and with the help of them - and Moonstone and their version 2 of the program 2-in-1, we can now move files from the PCW8512 to the Mac Classic via the 3.5 inch external drive.

There must be others who face a similar problem and who would be interested in a solution. This is it!
Geoffrey Boothroyd
Glasgow

8000 Plus: Thanks for helping others to get to the core (ouch!) of what must be a common problem.

Seeing green?

Recently I have noticed that when I switch on my PCW, instead of obtaining a uniformly green screen, it is covered in jagged black lines. Is this serious - and expensive to correct?
P C Crisp
Settle, N Yorkshire

8000 Plus: It sounds like you need to adjust the vertical hold button on the back of the machine - sometimes, it can be moved accidentally, and then produces this rather disconcerting effect! We suffered the same problem when we recently moved our PCWs to different desks, but soon found the cause - and luckily, the cure. Hope this helps!

Come in number 82 your time is up!

EXIT your standard 82 key PCW keyboard and **ENTER** the new full size 102 key enhanced PCW102 keyboard from Teqniche.

With improved key action, touch typist styling and dedicated software quick keys you could increase your computing productivity by as much as 20%. Manufactured to exacting standards each PCW102 is guaranteed for over 1 million individual key strokes, and priced at only £79 it costs less than a replacement Amstrad keyboard. So isn't it time to

STOP wasting time and start using the PCW102.

Once you've tried it, we feel sure that you won't want to **RETURN** to your old keyboard.

Competition

Find the correct answers to the competition questions below, and you could be the lucky winner of a brand new, luxury PCW keyboard!

One of the biggest selling points about the PCW is that it represents a complete 'package'. Once the machine is safely installed in the home or the office, it can be put to work immediately. But the human race is a strange breed. No sooner have we got something working to our satisfaction, than we want to improve matters.

We don't need to upgrade machines; the PCW provides everything that we need in a system – and more besides. It's just the creature comforts in life. We change printers, we buy 'extras' such as Rampacs, disc drives, mice – but we've never been able to

replace the one piece of the original package which is subject to the most constant battering of all; the keyboard.

Until now, that is. A company by the name of Pan Euro have come up with the first ever 'alternative' PCW keyboard. With its smooth contours and clicky keys, the Teqniche PCW102 allows even the most clumsy of fingers to tap the light fantastic. Such is the ease of movement that the keyboard even seems to increase typing speed. Indeed, so popular is the 8000 Plus model of the Teqniche, that we have had to set up a strict rota system to ensure that everyone gets a fair turn.

Apart from the initial impressions of added comfort and a better 'feel', the Teqniche's extra features – such as a separate numeric key pad and eight individual function keys – combine to make day to day work much more comfortable. If you turn to page 26 of this month's issue, you'll find an in-depth look at more of these extras.

The good news is that we have three of these keyboards to give away. All you have to do is to answer the questions below, and send the answers in on a postcard. Note that the address is different to the usual one; such is the response to the competitions run by 8000 Plus and her sister titles, that we've had to allocate a new building especially to sort the entries. So, the new address, *for competitions only*, is, Teqniche Competition, 29 Monmouth Street, Bath BA1 2BW. Entries to arrive before 25th April 1991. Good luck!

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1 How many keys in total does a standard PCW keyboard have?
   a 78   *b* 82   *c* 88

2 How did the QWERTY keyboard get its name?
   a It was invented by Quentin Werty
   b Because of the arrangement of keys on the top row of the keyboard
   c The first ever keyboard only had room for those six letters

3 When learning to type, which keys are officially known as the 'home' keys?
   a abcd efgh   *b* 1234 5678   *c* asdf jkl;

4 Which of the following sentences is used by typing teachers to demonstrate the use of every letter in the alphabet?
   a The quiet black dog jumped over the lazy duck
   b The quick brown fox jumped over the lazy dog
   c The quirky black duck jumped over the lazy dog?

5 RSA is an official examining body for typing and secretarial qualifications. What do the initials stand for?
   a Royal Secretarial Association
   b Royal Society of Arts
   c Registered Secretarial Association